

**THE RAILWAY GAZETTE**  
AND  
**Railway News**  
A JOURNAL OF RAILWAY MANAGEMENT, ENGINEERING, OPERATION AND RAILWAY NEWS.  
with which are incorporated  
THE RAILWAY RECORD, RAILWAY OFFICIAL GAZETTE, RAILWAYS ILLUSTRATED,  
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## ELECTRIC RAILWAY TRACTION

A Supplement illustrating and describing developments in Electric Railway Traction is presented with each copy of this week's issue.

**Dormitive Decoration** As an experiment in trying to please varying tastes the L.N.E.R. has reconditioned a sleeping car, decorating each pair of the ten compartments in different shades. Mahogany dado panelling is used throughout, but the upper part of the walls, and the ceiling, have been sprayed with cellulose paint, the respective colours being blue, yellow, green, and pink. The blankets harmonise with the decoration of each compartment, and are covered with a brocade bedspread. Sponge rubber as an underlay to the Wilton carpet is as restful to the foot as are the walls to the eye. And, lying on the accommodative bed, the passenger has but to reach out his hand to operate switches controlling the ventilation, heat, and strength of illumination, whilst with the other hand he can turn on the reading lamp over the bed, what time his eyes look upon the chromium-plated fittings that surround him. What more can anyone want? As the final letter of this last word in sleeping cars an electrically operated illuminated sign, visible all down the corridor, shows whether the toilet is occupied or not. If the choice of these decorations was made with the idea of inducing sleep we fear the L.N.E.R. has failed; they are so artistic that probably passengers will be kept awake by sheer supine sensuous satisfaction.

## L.N.E.R. Meeting

As was the case last year, Mr. William Whitelaw's address at the annual meeting of the London & North Eastern Railway Company last Friday was brief, on account of the review of the company's business and of the summarised statement of accounts which had been previously sent to the stockholders. Referring to the Road and Rail Traffic Act the Chairman pointed out that the railway companies were now in a position to obtain their full share of the transport of goods upon less disadvantageous terms of competition, but they did not intend to make any effort to obtain a monopoly of road haulage. Quotation of exceptional rates had been much speeded up by improvements in telephonic communication and 90 per cent. of the requests for such rates were answered by return. The delay in answering the rest arose from the necessity of consulting other companies where through rates were involved. In the development of freight transport the company has been for some years preparing for the rapid changes which require less handling of goods over short distances and speedier delivery over long distances. Though the speed at which changes now seem to be called for is somewhat embarrassing, the company has the matter of meeting these new demands well in hand by increasing the number of braked freight trains run at high speed, by the provision of new types of locomotive, and by many other methods. Reference was also made to the new tourist cars designed to meet the growing demands for long-distance excursion traffic.

## The Week's Traffics

In the traffic returns of the four group companies for the past week the Southern's is the only passenger train increase, but the advances in merchandise earnings continue to be substantial, and coal class earnings were generally better. Merchandise earnings for the year to date show increases of £500,000 or 14.54 per cent. on the L.M.S.R., of £472,000 or 19.87 per cent. on the L.N.E.R., and of £201,000 or 14.73 per cent. on the Great Western. Passenger traffics to date show an increase of £51,000 or 2.53 per cent. on the Southern and of £73,000 or 2.29 per cent. on the L.M.S. London Passenger Transport Board traffic for the past week amounted to £505,700, bringing the total for the 35 weeks to £17,388,700.

	9th Week				Inc. or dec.	
	Pass	&c.	Goods, &c.	Coal, &c.	Total	Year to date
G.W.R.	—	2,000	26,000	—	23,000	225,000 + 6.06
L.M.S.R.	—	2,000	46,000	7,000	51,000	615,000 + 6.87
L.N.E.R.	—	3,000	53,000	20,000	70,000	640,000 + 9.70
S.R.	+	7,000	8,500	3,500	19,000	110,000 + 3.90

## British Travel Films

We lately had an opportunity of seeing an excellent private show of British travel films produced primarily with the laudable object of attracting more overseas visitors to these shores. The programme was arranged by the Travel and Industrial Association of Great Britain and Ireland (called, mercifully, the T.A. for short) and included "London Town," produced by Miss Grierson, in which the metropolis is at last placed worthily on the screen in all its infinite variety; "Turning Her Round," a day in the life of the world's largest liner, the *Majestic*, in dock, provided with an intelligent running commentary; and films of Edinburgh, of East Anglia, of hop gardens in Kent, and of Britain's countryside generally. All these were good, although several were somewhat superficial, and one was left with an impression of the vast wealth that could be still brought to the screen. This programme was largely the product of the late E.M.B. Film Unit, and one is glad to know that, under various disguises, and with the help of the Post Office and the T.A., the good

work still goes on. The railways played their part in the scenes which we saw, but we strongly believe that much more could be done by the railway companies in conjunction with the T.A. and other agencies to "project Britain" pictorially, not only with the object of attracting more foreign visitors to our shores, but also with the greater purpose of revealing more fully and impressively to our own people the infinite resources of their own land, and the facilities which the railways offer for getting to know them more intimately.

#### **Government Assistance for Railways in America**

Loans amounting to a very considerable sum which have been allotted to railways in the United States by the Public Works Administration for maintenance and equipment are rapidly being translated into orders and are causing the return of many thousands of railway shopmen to work. Already about half of the £40,000,000 so far arranged has been allocated. One group of railways affected has announced that the placing of the largest equipment orders for several years will take place forthwith. Included in the equipment are some thirty high speed 4-8-4 type locomotives, fifteen of the 2-8-4 type and five of the 0-8-0 type. The orders also cover considerable quantities of passenger and freight vehicles, permanent way and signalling equipment and other supplies. Repair work, the reconditioning and rebuilding of locomotives and carriages, bridges, buildings of various kinds, and other plant is also being financed out of the loans. The Lehigh Valley Railway has put 1,000 shopmen back on a five-day week at two of its works centres, while the Pennsylvania is reinstating a total of 1,200 men in three of its principal works. Quite a considerable amount is being spent in effecting improvements to existing passenger vehicles, notably in the direction of air conditioning, which will also be applied to most of the new stock to be built.

#### **Swedish State Railways in 1933**

The report of the year's working of the Swedish State Railways for 1933 shows that the surplus of income over expenditure amounted to 33.4 million kronor, an improvement of 3.7 million kronor over the preceding year. The improvement is due mainly to economies in working, particularly in the number of staff. The total income for 1933 was 166.2 million kronor, the same as for 1932, while expenditure was much reduced. During the early part of 1933 there was a falling off in goods traffic but later an improvement set in which was maintained to the end of the year. As regards passenger traffic there was also a reduction at the beginning of the year and, though there was improvement later, this was counterbalanced by reduced fares which were introduced in May. The Swedish State Railways show a greater surplus for 1933 than that of any other Scandinavian railway. Comparison with the railways of Norway, Denmark and Finland also shows that the Swedish railways are run with a smaller staff per kilometre of track and per axle kilometre. Had not the building strike restricted transport of building materials for some nine months of the year, it is not unreasonable to suppose that the surplus for 1933 would have been much greater than it is.

#### **Centenary of the Zollverein**

One of the great lessons which the Germanic states learned from their disasters following the rise of Napoleon was the expediency of union. This year Germany celebrates the one hundredth anniversary of the first outstanding event in her progress towards economic

unity, namely, the initiation of the Zollverein, or customs union, headed by Prussia. This prepared the ground for her political unification under the guidance of Bismarck as one of the greatest empires of the pre-war world. From the point of view of railway progress the establishment of the Zollverein undoubtedly did much to encourage the construction of the network of lines, unhampered by artificial customs barriers, which were instrumental in converting a group of small states into a great commercial and industrial country. Although until after the European war the German railways, largely state owned, were in the hands of the individual states, they had been evolved on the basis of trunk lines, many of international significance, in a way which would have been difficult had customs boundaries existed at each state frontier in the early construction period. The relative ease with which these state systems could be welded into one unit was exemplified when the Reichsbahn was created after the war.

#### **Where 1932 was too Short!**

The Committee of Public Relations of the Eastern Railroads in the United States has once again issued its annual wall calendar on which is shown where the freight rates and passenger fares went to on Class I railways during 1932, which year's figures are the latest available. The receipts for each day of the year are allocated to some particular category of maintenance costs. Most significant is the fact that not one day's receipts were devoted to dividend payments. These obligations were met by earnings of past years, and reserve funds had also to supplement the insufficient amounts apportioned for interest and rents to the extent of 34 days' earnings. Evidently in these troubled times a year of only 365 days is not long enough for the American railways! Of the actual earnings for 1932, those of 168 days were absorbed by wages, 63 by materials and supplies, 52 by interest and rent, 32 by taxes, 20 by fuel, and 30 in other expenses. As would be expected, each of these items of expenditure has claimed a steadily increasing number of days' revenues during the last nine years, with the exception, however, of materials and supplies. Economies in that direction have enabled a reduction to be effected over that period of 7 days from 70 days in 1924 to 63 in 1932.

#### **Alternative to Private Sidings**

Private sidings into works near railways are necessarily expensive to instal and may not always be the best means of providing for the transport of materials and products. Nowadays they are sometimes laid in rather with a view to preventing traffic being lost altogether by the railway concerned than with any expectation of immediate profit. There are, however, other means of transport which can be provided between factories and railways in favourable conditions. For example an electrically operated system of belt conveyors was installed some time ago between Tate & Lyle's sugar refinery at Liverpool and the L.M.S. goods station at Great Howard Street. The belt conveyor method is very suitable for conveying sacks of sugar, and loading of the wagons can be accomplished direct from the belts. The capacity of this particular plant is 500 1-cwt. bags an hour, and they are transported thus over a busy thoroughfare and a four-track electrified railway line. We know of other somewhat similar belt conveyor installations between factories and railways, but instances occur to us of possibilities in this direction unexploited. Ropeways can also be adapted to connect works with railways, and there may be circumstances which could be met in other unusual ways more economically than by the orthodox siding.

### "Track-Walking" in America

An American Roadmasters' Convention, of which the proceedings were reported in our contemporary, *Railway Engineering and Maintenance*, recently discussed the question of the periodical inspection of track, or "track-walking," as it is called in the U.S.A. It was generally agreed that the old method of patrolling the track daily with length-men was one originating in conditions which had passed out of existence with the improvements since effected in the track structure, and its greatly increased strength; at the same time it was not denied that frequent inspection of the track is essential in order to ensure safe and uninterrupted operation of the trains. Particularly was systematic inspection still necessary owing to new hazards arising out of modern conditions, such, for example, as the transverse fissure defect in rails, which was practically unknown in the light-rail sections of earlier years. To replace the wasteful methods of former years, new systems have been devised. On several American railways an inspector is provided with a light motor trolley, and is required to make a daily inspection covering approximately six sections of the line; this method ensures inspection by a competent man, though necessarily not so close or detailed as is possible with an inspection on foot. On the Union Pacific lines equipped with automatic signals, the signal maintainer is required to inspect both track and signals in the course of his travels, and to report to the section foreman any defects in the road that might have serious consequences. In this country, the Great Western was the first to institute daily trolley inspections of certain branch lines.

### The Altrincham Fatal Collision

The first remark we would make on the accident report which is reviewed in our present issue is that a period of exactly three months has elapsed between the appearance of this report and the one—that on the mishap at Bowling Basin on September 8—immediately before it. That is good testimony as to the safety of British railways. The case now being dealt with was the collision of December 6 at Altrincham between two electric trains, wherein the motorman of the arriving train was killed. An unusually dense fog was the original cause of the accident, which might, however, have been prevented had the line on which the first train was standing been protected by track circuit. Colonel Trench observes that such equipment has been under the consideration of the two companies which own the line jointly and, as it has now been definitely decided to provide track circuit, he has no recommendations to make. There was some telescoping as a result of the collision, and that has led to a discussion as to whether the ends of motor coaches should be strengthened to diminish such risks, but, as Colonel Trench wisely remarks, it is a sound principle to concentrate resources upon minimising the risk of collision.

### Steel Sleepers in South Africa

Most of the lines comprising the South African Railways were originally laid with wooden sleepers, and with the idea of keeping down to a minimum the importation of timber, railway forests were planted. On March 31, 1933, the total area of these amounted to 66,525 acres, and they have hitherto supplied large quantities of the sleeper requirements of the Union. At the moment their future is the subject of a special enquiry by the Department of Forestry. Steel and wrought-iron sleepers have also been used for many years in South Africa, with varying results. The main line from Mafeking to Bulawayo was laid with steel sleepers about 37 years ago and large

numbers of them are still in good condition, although they have been removed from that line in the course of recent relaying. On the other hand steel sleepers on certain lines have had to be removed, owing to rapid deterioration, after a very short time. The design of the steel sleepers which proved unsatisfactory is thought to have had much to do with the result, but in 1923 a successful standard design was evolved for 60 lb. and 80 lb. track, and since then it has been the policy of the administration to extend the use of this type of sleeper as rapidly as possible. Experience has shown that it costs less than a wooden sleeper, has a longer life, and its use results in a substantial saving in maintenance costs.

### Heat Insulation in Locomotives

An important problem in the design of a steam engine is the prevention of loss of heat by radiation, and therein it differs from that of the internal combustion engine, which is to dispel the heat generated. Thus it becomes necessary adequately to clothe the boiler, cylinders and piping. "If," as a writer on the subject once said, "the endeavour was made to run an express train with an entirely unclothed locomotive boiler for an appreciable distance, there would arise the need of greatly increasing the capacity of the tender." Thus the fitting of effective insulating material is all-important, and from time to time experiments have been carried out with a view to improving the methods employed. The problem is to some extent aggravated in modern practice owing to the higher temperatures used. Conditions vary somewhat according to the services on which locomotives are engaged, but in any case the desirability of lagging which will most efficiently insulate the parts affected and which can be applied so as to give reasonably permanent results was never of greater importance than now.

**Exit the "1400" Class** The breaking up at Horwich of the last of the well known "1400" class 4-4-2 locomotives designed by Sir John Aspinall when Chief Mechanical Engineer of the Lancashire & Yorkshire Railway marks the final disappearance of a class in which those who follow the locomotive subject have never really lost interest. Although they were not actually the first engines of the Atlantic type to be introduced on the railways of Great Britain, it was only a matter of months that robbed them of this distinction, which, by virtue of priority, went to Mr. H. A. Ivatt with his "990" class on the then Great Northern Railway, the first of which made its appearance in 1898, to be followed in 1899 by Aspinall's No. 1400. A point of difference between the two classes was that the 990's had outside cylinders driving the second pair of coupled wheels, whereas in the 1400's the cylinders were placed inside and drove the leading pair. With coupled wheels 7 ft. 3 in. in diameter and a coupled wheelbase of only 7 ft. 6 in., a large and high-pitched boiler, deeply recessed smokebox and other distinguishing features, the L. & Y. locomotives at once claimed the attention of all observers and were regarded as of quite outstanding character in British locomotive practice. Forty of them were built at the Horwich works between 1898 and 1902, and, at the time of its withdrawal from service for scrapping, the last of the series was lettered and numbered L.M.S. 10316. Thus, the hope cherished in some quarters and referred to in the article on these locomotives appearing on page 619 of *THE RAILWAY GAZETTE* dated April 22, 1932, that one of the series should be repainted in its former livery and kept at Manchester or some other convenient place on the L. & Y. section has been finally dashed.



### U.S.A. Railways in 1933

A TENTATIVE estimate from *Railroad Data* of results obtained by Class 1 railroads in the United States for the year 1933 was published in THE RAILWAY GAZETTE of January 26, 1934. Exact figures are now available from the Bureau of Railway Economics which show that Class 1 railroads in 1933 had a net railway operating income of \$474,369,438, equivalent to a return of 1.80 per cent. on their property investment, as compared with \$326,317,936 or 1.24 per cent. in 1932. The railways to which these figures apply represent 240,744 miles. Gross operating revenues amounted to \$3,095,446,191, a decrease of \$31,442,900 or 1 per cent., but in the operating expenses of \$2,249,318,750 there was a reduction of \$154,225,045, or 6.4 per cent., bringing the operating ratio down from 76.87 per cent. to 72.67 per cent. Taxes, at \$249,539,964, were lower by \$25,631,897 or 9.3 per cent. Thirty-three Class 1 railroads operated at a loss in 1933.

While some improvements in the railway situation occurred in 1933, it was in fact one of the worst years through which American railways and the industries dependent upon them for business ever passed. There was a small increase in freight traffic and earnings, but this was more than offset by a decline in passenger earnings, and gross earnings were the smallest since 1915. Passenger earnings were the smallest since 1900, although they actually increased during the last five months of the year. Operating expenses were the smallest since 1915, and the reduction in comparison with 1932 was secured largely at the expense of maintenance, total expenditures for maintenance of about \$920,000,000 being the smallest since 1912. Railway constructions made a new low record and railway abandonments a new high record. The new mileage built amounted to only 24 miles, as compared with 163 miles in 1932, the previous low record, and the mileage abandoned was 1,876, as compared with 1,626 miles in 1921, the previous high record. At the same time, the year 1933 brought to the railways, as it did to American industry in general, the first upward turn in business that they had experienced in more than three years of continuous and discouraging declines, railway net operating income increased, and the net income available for railway fixed charges fell short of meeting those fixed charges by only a small margin, as contrasted with a shortage of nearly \$140,000,000 in 1932. Their financial position also received assistance from Governmental sources, from the Railroad Credit Corporation, and from the workings of a liberalised Bankruptcy Act.

The recently-issued report of the Interstate Commerce Commission covers the period from November 1, 1932, to October 31, 1933, and therefore deals fully with the Emergency Railroad Transportation Act, 1933, and the duties of Mr. J. B. Eastman, who has been appointed Federal Co-ordinator of Transportation under that Act. The railways themselves, under the provisions of the Act, have organised co-ordinating committees for the eastern, southern, and western areas, to make thorough investigation of railway practices and suggest methods of dealing with current problems. This is in accordance with the first purpose stated in Section 4 of the Act to encourage and promote or regulate action on the part of carriers to avoid unnecessary duplication of services, &c., and generally to prevent waste. The second purpose stated in Section 4 is to promote financial reorganisation of the railways, and the third is to provide for the immediate study of other means of improving conditions surrounding transportation in all its forms and the preparation of plans therefor. Because of the duty laid upon the Co-ordinator in respect of this third purpose, the Commission makes no recommendations as to further legislation under this

head, as it is awaiting the report to be submitted by the Co-ordinator.

In June, 1933, the Commission held a general investigation for the purpose of determining whether the existing interstate rates and charges were unreasonable. In the result the commission found that general reductions were not warranted, and that the evidence was not sufficient upon which to determine what reductions, if any, should be made in rates on particular descriptions of traffic or on particular commodities. The temporary freight rate increases on certain commodities, which had been authorised by the Commission in 1931 were estimated to have added about 2½ per cent. to rail freight revenue. These increases, generally known as "surcharges," were continued until September 30, 1933, when, under appropriate tariff provisions, they expired. The report also calls attention to other important charges made by the Transportation Act of 1933 in amending Section 15a of the Interstate Commerce Act so as to eliminate "fair return on the investment" as an element in rate making, and in repealing the "recapture" clause of the Transportation Act, 1920.

### Russian Transport

FROM the St. Petersburg-Pavlovsk line of 1837, the first three of whose locomotives were built respectively by Robert Stephenson, Timothy Hackworth, and Tayleur, the Russian railway system developed through State and private enterprise to a mileage, in 1913, of 36,500. The Pavlovsk line was constructed by a private company, which was, however, backed up by Czar Nicholas I, but the Moscow-St. Petersburg line, which followed in 1842, was constructed under the auspices of the State. Progress after this date was very slow, and the Crimean War exposed in no uncertain terms the inadequacy of the railway system, which at that time consisted of only 650 miles. The Government therefore introduced a policy of extension based on private concession, the State in most cases guaranteeing a certain amount of capital and a minimum rate of interest. This arrangement eventually proved unsatisfactory, for the concessionaires had no incentive to construct and operate the lines economically, and the calls upon the Treasury were consistent and large.

A committee of enquiry into railway affairs in 1876 exposed many of the faults of this system, and a new principle of combined State and private management was inaugurated, with the former gradually absorbing the latter. At the time of the enquiry there were 44 distinct private companies in existence, but by the beginning of the present century the number had dwindled to six, all of which were run at a profit. After the Russo-Japanese war, financial difficulties caused a partial return to construction by concession, and at the commencement of the European war approximately two-thirds of the railway mileage was in the hands of the State. The remainder was largely influenced by direct Government interference or financial assistance. Strategic considerations had played a great part in the layout of the railway network, more particularly in the lines running westward from Moscow and Rostov, those going east from the Urals, and, of course, the great Trans-Siberian Railway. The cumulative result of this layout, added to much speculative building, excessive competition in certain regions, the backwardness of the country as a whole, and a colossal amount of graft, was a great loss on operating, although matters improved somewhat between 1908 and 1913.

Consequently, Russia entered the war with a transportation system totally inadequate to her needs, and years behind the times, and matters did not improve until long



after the termination of civil war. The industrialisation of the country was eventually organised under the New Economic Policy, and later by the first Five-Year Plan, and the progress made has been such that 18 to 29 million more people are now engaged in industrial and commercial pursuits than before the war. Compared with 1913, this has led to an increase of 40 per cent. in the railway mileage, 400 per cent. in passenger business, and 200 per cent. in freight traffic. The development of a transport organisation to meet the needs of such progress has caused much trouble, but rigorous measures are now being taken to remedy the lack of unskilled labour and the lax control which have marred the effectiveness of the first and second Five-Year Plans. We give, on page 405 of this issue, a précis of two papers by Drs. C. D. Campbell and M. S. Miller outlining the present position of transport in the U.S.S.R. By proper co-ordination between rail, road and inland waterways, it is anticipated by the Soviet authorities that Russian transport as a whole will soon be equal to the country's requirements.

### Revision of International Convention

MORE than one reference has already been made to the meeting of the Rome Conference for the revision of the Convention Internationale pour Voyageurs et pour Marchandises (C.I.V. and C.I.M.), and we are now able to give briefly the conclusions arrived at in the revision of the C.I.V. This convention, upon which all Continental States are represented, regulates international passenger transport generally. The central offices of the C.I.V. and C.I.M. at Berne had previously collated 137 proposals submitted to the conference by various states, some of them entirely new, and others in the form of amendments to existing regulations as issued by the International Committee of Transport. That body came into being a few years ago to discuss and elaborate amendments to, and to compile uniform rules and regulations of, the Berne Convention. Although this committee is therefore a preliminary factor to the convention itself, its decisions are more summary in effect, as the rules are revised from year to year, whereas the Berne Convention can carry out revision only once in every five years, and even then further time is lost in the actual application of the rules, due to the necessity of ratification by the states concerned and other legal requirements of the various countries. An interesting point that came under discussion was one affecting road transport and shipping services supplementary to railways, and the rights and obligations laid down by the convention now apply to these supplementary services, subject to such modifications as the different systems of transport necessitate. On the other hand, many important air or road motor services which cannot be considered as forming a part of any railway service are therefore excluded from the advantages of a combined transport organisation under convention rules. After considerable discussion the conference framed an additional clause authorising railways to establish combined tariffs with transport concerns other than those of a supplementary nature, with suitable modification.

One important question discussed was the suggested alteration in the validity of international tickets. According to present rules, a single ticket is available for one day for each 150 km. or fraction of that distance, and a return ticket for two days up to 50 km., three days up to 100 km. and one day for each additional 100 km. or fraction thereof. The new regulations lay down that a single ticket shall be available for one day for each 100 km. or fraction of that distance, with a minimum of two days, and a return ticket one day for each 50 km. or fraction of it, with a minimum of four days. The rule that reduced fare

tickets issued on special occasions may have a different validity has been maintained. Upon the subject of break of journey the convention came to no definite conclusion. The Italian delegation suggested that passengers travelling more than 300 km. should be permitted to break their journeys at any intermediate station, but this suggestion was not agreed to by the convention as a whole. Nor was any agreement reached regarding the age limit of children in respect of free travel and half-fare tickets. On the other hand, certain minor amendments with regard to the taking of hand luggage into compartments were passed, as well as to the original rule relating to the carriage of small domestic animals in railway coaches.

Important changes have been made in the luggage regulations. For instance, the old rule laid down that luggage was "the personal luggage of the passenger required on the journey." This has now been modified to read merely "the luggage of the passenger." Again, with regard to articles described as luggage, any reference to the passenger has now been altogether omitted, and the condition that such articles can be registered as luggage only on the presentation of a passenger ticket now no longer exists. Moreover, all kinds of merchandise may now be sent as registered luggage, subject to certain restrictions as regards packing, dimensions, &c. In this way the very high luggage rates benefit the railways, whilst, on the other hand, the senders benefit from the great simplicity of registration of the luggage as compared with the numerous formalities and the filling in of way-bills, &c., necessary for sending similar articles as freight. The luggage registration rules have also been modified, in that passengers have, where alternative routes exist, to state the route by which they are travelling, and in case of unaccompanied luggage the sender accepts the rights and obligations vested in the would-be passenger, according to C.I.V. rules. New and simplified rules have now been framed for the registration of bicycles and sports outfits, and a special paragraph deals with the trains by which all luggage must be forwarded. Owing to the fact that responsibility in case of accident or death of passengers is subject to the civil laws of the particular country in which an accident takes place, the question of the responsibility of the railway companies has again remained unsettled. Responsibility for loss of luggage or delay in delivery is a matter closely connected with the corresponding responsibility in the matter of goods, and it was therefore decided to appoint a joint committee of the C.I.V. and C.I.M. to inquire into this matter.

### Snow Ploughing

THE loss resulting from even temporary blockage of main lines is so serious as fully to justify the provision of special equipment for the removal of snow wherever there is risk of heavy drifts, notwithstanding the fact that it may be idle for most of the year. In these islands snow drifts are usually prevented by the frequency of the train service except in the north of England and Scotland where, as a rule, it is necessary to use wedge-shaped snow ploughs on the fronts of locomotives now and again each winter. A small plough below the buffer beam is considered by many to be capable of shifting quite deep snow drifts, but others prefer a larger plough, covering more of the engine front. Abroad, where winters are more severe and heavy drifts are common, rotary ploughs, cutting a passage slightly wider than the normal construction gauge of the rolling stock, are commonly used. These may be followed by a side-plough enlarging the cut. It may also be necessary to make provision for cleaning the rails and the space between them by suitable auxiliary devices. Machines representative of the latest German practice are described in an article further on in this issue.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of Correspondents)

### The British Executive Employment Society

Hatch House,  
Burnham, Bucks.  
February 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Having read in the February 2 issue of THE RAILWAY GAZETTE an article in connection with the activities of this society, I should like to emphasise the fact that no one who visits the offices of the society can fail to be impressed by its aims and objects. I have been myself a member of the society for the last three months, and, from frequent visits, can speak from personal knowledge of the efficiency with which its very serious problems are being tackled.

The most meticulous care is taken to ensure that, on receipt of an inquiry from a prospective employer, only the names of those men whose qualifications and experience render them entirely suitable are submitted. An analysis of each member's career is made and recorded in such a manner that, no matter how the inquiry is framed, the employer can be informed within a few minutes as to whether or not the society has a member suitable to fill the position; and, in cases where no such man is available, the employer is told so immediately so that no time is wasted.

The value of this to employers cannot be over-estimated, whether in the technical, commercial or business spheres, and it places the society in an unique position which is certainly not approached by any other organisation.

As a civil engineer of many years' experience, I am convinced that every man qualified for, and seeking, an executive or administrative post would be well advised to communicate with or call at the offices of the society at 133, Oxford Street, London, W.1, in order that they may see for themselves how the great problem of finding employment for the members is being undertaken. I would like to add, in conclusion, that this service is being rendered, both to the employer and to the society's members, free of all charge whatever.

I am, Sir,  
Yours faithfully,  
J. P. PURNELL-EDWARDS,  
A.M.Inst.C.E.

### The Signal Engineer's Department

Addison Gardens,  
Kensington, W.  
February 25

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Why is it that so many overseas railways, many of them important ones, do without Signal Departments? Is it because signalling is regarded by them as unimportant, or is it that these railways choose to run their lines in the cheapest manner without regard for safety and orderly running? The pages of "The Universal Directory of Railway Officials and Railway Year Book" show that some railways possess a full staff, whilst others, just as important, are run with as few officers as possible—some even have no department at all for signalling.

This policy is unsatisfactory and to be condemned as one that leaves every excuse for failures and accidents, with possible loss of life. Railways are ill advised to do without the Signal Engineer's Department. Prevention is better than cure, and it surely should be the policy of such railways to shut the door before the horse bolts rather than wait until something happens and then prescribe a remedy. The best single way to make railways immune from disasters, failures, accidents and delays is by introducing, retaining and making permanent a Signal Department. Once allow apparatus to be wrongly handled and incorrectly maintained, and the human factor will again take the upper hand. The greater the experience of the Signal Engineer the more sure

can the railway be of safety. What are the views of the Institution of Signal Engineers? Surely all members, especially those overseas, are entitled to some declaration, or is the institution agreed to allow signalling to be handled by those who have no intimate knowledge of the profession?

Yours faithfully,  
JAS. PREECE

Romford,  
Essex.  
March 5

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The question of status of the signal engineer is one which surely will have interest for the Institution of Railway Signal Engineers. Are not its members entitled to some statement with regard to status, importance of signalling, and prevention of doing away with the Signal Department? All members of the Signal Department would, I am sure, look to this Institution to point out the importance of signalling, of the signal engineer and his assistants on railways.

The circumstances, as explained in your correspondents' letters, seem to point to the fact that many overseas railways are apparently fostering the policy of making the Signal Department unimportant, thus forming the excuse for making cuts in the signal staff, for dispensing with the services of the signal engineer, in fact for doing away with the Signal Department altogether on the excuse of economy. It seems, therefore, only natural that members of the signalling profession would welcome a statement on the subject from the Institution to find out if they agree or not, if so, why, and if not, what do they recommend?

Yours faithfully,  
J. W. BALDOCK

### High Speed Steam Locomotives

Recess,  
Witham, Essex.  
March 7

TO THE EDITOR OF THE RAILWAY GAZETTE.

SIR,—The two letters, under the above heading, "High Speed Steam Locomotives," on pages 204 and 205 of THE RAILWAY GAZETTE of February 9, prompt me, as the merest layman, to give some of my own observations on this much vexed question of coupled wheels and their diameters. For some years I have been a fairly regular observer of express locomotive performance in this country and I am led to suppose that almost the only reason for the use of engines with relatively small six-coupled wheels (and in many cases of machines which would have been regarded 30 years ago as goods engines pure and simple) is the enormous increase in train weights. In very few cases have I noticed that it is necessary to haul more than 270 tons tare except at holiday times, yet we have daily before us the spectacle of 400 to 500 ton trains containing often no more than 200 passengers. Of course, such engines as the L.N.E. Pacifics and L.M.S. "Royal Scots" and "Princesses" are needed to cope with them! For what other reason is the G.W. scrapping every four-coupled engine it possesses?

With reasonable loads (by which I mean anything under 270 tons) the G.W. "Flowers," the G.N. Ivatt Atlantics or even the Midland Johnson singles were as capable of high speed with less wear and tear on motion and road as any modern monster. The older express engines are not being scrapped, as far as I can see, because it is more economical to replace them at the work for which they were designed, but because they are incapable of keeping time with the unnecessarily large train loads of to-day.

The record of the 7 ft. N.E. 4-4-0 No. 1621 during the race to Aberdeen of 1895 remains unbeaten: moreover, she

is still running in good condition, but her sisters are going to the scrap heap for no better reason than that the East Coast trains are now beyond their powers. One could go on citing such instances almost for ever. The question is: What have the railways to say in answer? How do they justify the haulage of these mammoth trains whose speed could so easily be increased by cutting their weight?

Yours faithfully,

ARCHIBALD H. HASTIE

[Against our correspondent's theory it may be pointed out that the speediest engines so far have had six or eight coupled wheels, as witness the G.W.R. "Castles," the L.N.E.R. Pacifics, the C.P.R. 4-6-4's, and the Paris-Orleans 4-8-0's,

all of which are easily capable of sustained speeds approaching 90 m.p.h. The effect of adding one or two coupled axles in otherwise identical designs would probably be negligible, either in respect of speed or maintenance cost, whereas it would certainly be appreciable in increasing the sphere of usefulness of a locomotive. That being so, it seems wise policy to confine new construction mainly to multiple coupled locomotives. The scrapping of locomotives and their replacement by new ones incorporating the latest and very important refinements, rather than prolonging their life by means of heavy repairs, is generally justifiable on account of running economy, apart from considerations of mere power.—Ed., R.G.]

## PUBLICATIONS RECEIVED

### The South American Handbook.

Edited by Howell Davies. London: Trade and Travel Publications Limited, 14, Leadenhall Street, E.C.3. 7 in. by 4½ in. Pp. 615. Price 2s. 6d.—South America is a continent which develops with astonishing rapidity between each appearance of the only year book and guide devoted to its resources. The 1934 edition of "The South American Handbook," therefore, has been greatly increased in size by the inclusion of fresh information. At the same time, all existing sections have been thoroughly revised and brought into line with the latest facts and figures. By presenting so much material in so compact and usable a form, the publishers have rendered an equal service to business men and travellers. The commercial sections include trade figures and information regarding the industrial development of each republic, together with particulars of exchange rates and postal charges. Rail, road and air communications are very fully treated. Train services, times of transit between important centres, cheap fare facilities and suggested railway tours receive detailed attention. Of great value and interest to the traveller are the mass of topographical detail, the lists of hotels, and the authoritative advice on the problem of tipping, the last named being one that assumes formidable proportions if faced without guidance in a continent enjoying the varied customs and the temperament of South America.

### India's Foreign Trade Since 1870.

By Parimal Ray, M.A., Ph.D., with an introduction by Sir Josiah Stamp, G.B.E. London: George Routledge & Sons Ltd., Broadway House, 68-74, Carter Lane, E.C. 9 in. x 5½ in. 300 pp. Price 12s. 6d. net.—In Dr. Ray's book we have, presented in such a form for the first time, a complete and clearly delineated outline of the extraordinary development of India's progress in trade over the past sixty odd years. As we know to-day, little as it was realised during the critical past years, that growth has not been unattended by the troubles of adolescence, and now we are reaping some of their disquieting consequences. Naturally one cannot give one's customer the wherewithal to

produce the very goods which he now has to buy without expecting trouble. A new page in India's commercial history was written subsequent to 1870, due almost entirely to the growth of railways and other mechanical transport. Now we are faced not only with the insidious competition of Japan, but the industrialisation of India herself. An important gap is filled in Part III, which deals in full with the influence of currency on trade during the period opening with the changes which took place between 1873 and 1893, and with the developments which followed the closing of the mints, the war period and the stabilisation of the exchange. This is not an attempt at an encyclopædic work on the subject, but a remarkably successful survey of facts and consequences. An appendix of tables, currency and trade, and an extensive bibliography add greatly to the practical value of the book.

### The Electrical Trades Directory and Handbook, 1934.

London: Benn Brothers Limited, Bouverie House, 154, Fleet Street, E.C.4. 9½ in. x 6 in. Pp. 1,474. Price 25s. net.—The 1934 edition of the "Blue Book" retains all the features that have made it a standard reference work for the electrical trades and also incorporates much valuable new information. The regular directory sections have been revised and brought up to date, and in some cases considerably extended. The geographical section, for example, now includes every member of the Electrical Contractors Association, the Electrical Contractors Association of Scotland, and the National Register of Electrical Installation Contractors. In the Handbook Section, most of the old features have been retained after thorough revision. More than 300 pages of statistical matter are included, incorporating new features dealing with annealed copper conductors, red fire poles, and the horse-power of motors. Two new tables show respectively local time in the principal countries of the world and all overseas telephone routes and rates. There is also a two-page map of the completed grid system with inset showing the London cable grid. The publishers advise early application for copies of the book as supplies are limited.

### Colloidal Graphite Lubrication.

E. G. Acheson Limited, Thames House, Millbank, London, S.W.1, issues a Technical Bulletin dealing with the industrial application of colloidal graphite and illustrating the advantages of graphited oil films for lubrication purposes.

### Electric Fans.

—We have received from the London Fan & Motor Co. Ltd., Darnoc House, 33.37, Alfred Place, London, W.C.1, a folder describing a range of Breeza exhaust and volume fans. These are supplied with a.c. or d.c. motors for use on supplies ranging from 100 to 250 volts. Propeller-type and box blades are available as required. Regulators and automatic louvred shutters can be fitted in all but the smallest sizes.

### Slotters.

—The Butler Machine Tool Co. Ltd., Victoria Ironworks, Halifax, has published a new catalogue, No. 4A, describing the larger sizes of high-production slotters. Models of 14-in., 20-in., and 28-in. stroke are listed, and the leading features of their construction fully illustrated and described. The lubrication of all working parts is very adequately provided for. The gear-box runs in oil, and a one-shot pump supplies all other bearings. Power traverse to the tables is fitted in all sizes. Machines with electric drive are operated by a pendant push-button control. An electric feed unit is fitted to a special 28-in. stroke model. A comprehensive range of tool holders for use with the machines is also listed.

### Lorry Cranes.

—Ransomes & Rapier Limited, Waterside Iron Works, Ipswich, has sent us an illustrated leaflet describing 3-ton and 6-ton petrol or diesel lorry cranes. The 3-ton model is offered mounted on a Thornycroft Iron Duke type VC.4 rigid four-wheeled chassis, but can be adapted to suit many other types. A variable-voltage generator, driven from the lorry's 36-h.p. engine, supplies current for the derricking, hoisting, or slewing motors. Any of these motors can be operated simultaneously at the required speed by the ordinary accelerator pedal in the driver's cabin. An additional control point, ensuring an unobstructed view of hoisting operations, is provided on the revolving superstructure. The 6-ton crane can be supplied on a six-wheeled chassis.



## THE SCRAP HEAP

It is claimed that railways have done more than anything else to unite the peoples of the world. The Underground has certainly brought thousands of them very close together.—*From "Punch."*

A number of tombs dating from the fifth century have been discovered during excavation work on the projected Moscow underground railway, states a press message from Helsingfors. Among other discoveries is the buried ruin of a fortified castle built in the sixteenth century by Ivan the Terrible.

Jones: I'm told that more people miss the 12.50 than any other train.

Smith: Strange, how d'you account for it?

Jones: Well, you see, it's ten to one if they catch it.

Following the opening on October 29, 1838, of the Berlin-Potsdam Railway, on which the trains reached the then respectable speed of 21½ miles an hour, a sarcastic jester demanded that the company provide means for protecting passengers from being molested by crippled beggars hobbling along beside the trains on their crutches. The management of this line erected in 1840 in Steglitz, then a village and to-day part of Greater Berlin, a theatre in order to attract more passengers. Interest in the new means of travel had declined so greatly that it had to be encouraged by issuing free theatre tickets and by auctions of livestock.

### RABBITS!

A carpenter has been employed by the G.W.R. in connection with a household removal from Burnham, Bucks, to Kidderminster. Included in the effects were forty-eight valuable white Angora rabbits, and, in order to ensure their having a comfortable journey, it was decided to convey them through-

out in their hutches. At the station, these were fixed securely to the bottom and sides of the special truck, which was converted by the carpenter into a huge rabbit hutch. This is believed to be the first time a carpenter has been specially engaged by a railway company in connection with a removal by rail, although charwomen and gardeners have previously been employed.

"VICTOR," OF EUSTON, TO RETIRE  
Euston station will shortly lose one of the best-known members of its staff

collar or chain, only the collecting-box strapped to his back, and when working a train his instinct and long practice enable him to miss out empty coaches and compartments. Victor is a great favourite with children, and his record for a week's collecting is £35.

### IRELAND'S WAY

There is an Irish version of the Scot who travelled 2,500 miles to get his money's worth out of a 10s. weekly ticket. "Is there anybody here without a ticket?" asked the ticket collector. "And I haven't got a ticket at all," said the pretty girl in the corner. "Sure and it's the cheapest

**DIE SPOORWEE BEHOORT AAN U-MAAK GEBRUIK DAARVAN**  
**YOU OWN THE RAILWAYS—USE THEM**



*A design by the South African Railways Administration on the back of its envelopes. Notice the similarity between the slogan and that which was recently awarded a prize in England in connection with road transport. "The roads are yours—use them"*

in the person of Victor, the collecting dog, who has patrolled the station platforms in the cause of charity for the past 6½ years, and who is now beginning to show signs of old age. Before going into honoured retirement, however, Victor and his custodian, Porter Edwards, hope to beat the record set up by Victor's predecessor in office, Roy, who collected £3,100 during his career at Euston. Victor, a silky-coated retriever, who started work in July, 1927, has already collected £2,600, and as a result of his efforts over 500 cases of distress occasioned through sickness, &c., among the L.M.S. wages staff have been assisted.

To carry on when Victor retires the L.M.S. have appointed an understudy, Jack, a big two-year-old curly-coated retriever, who is rapidly assimilating the technique of "working" express passenger trains with his collecting-box. During his long career Victor has brought the work of charming gifts from passengers to a fine art. He wears no

way of travelling," said the collector, and went away.—*From the News Chronicle.*

Old Lady to Booking Clerk: If you please, I want to go by train.

Clerk: Yes, madam: where to?

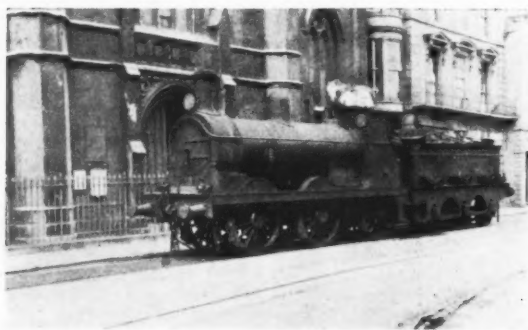
Old Lady (fumbling in bag): I can't remember the name of the station, but I have a letter from my daughter somewhere here, and she told me—

Irate Would-be Passenger (at head of queue): Oh, h — !!!

Old Lady: Thank you so much: How very forgetful of me. Third return to Hellfield, please.

There was an amusing incident on the L.N.E.R. business office train from King's Cross to Newcastle. A belated passenger, in the rush to catch the train, lost his season ticket. On the journey an inspector naturally demanded the fare and the traveller immediately hurried to the typing compartment and there and then dictated a letter to the company explaining the circumstances and asking for a refund.—*From the "Star."*

The Warsaw police have arrested a man for stealing six miles of railway line, which he took away in daylight. Though seen doing so by the police, nobody suspected anything was wrong.



### "WAITING AT THE CHURCH"

*An unusual snap of Southern Railway engine No. 1108 waiting to proceed to the docks at Dover. We reproduce the photograph, which is by G. A. Steckler, by courtesy of the "Southern Railway Magazine"*

## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

*Financial improvement and remarkable details of New Zealand railways—State aid versus higher tariffs in Spain—Brazilian military labour for railway construction—List of Chinese railways—Canton-Hankow construction works—Royal train and relief for compulsorily retired staff, S.A.R.—Competition with rail traffic to Trieste*

### NEW ZEALAND

#### Rising Popularity of Railways

Indications are everywhere apparent of the rising popularity of the railways. For the four-weekly period ended December 9, 1933, the gross revenue showed an increase of £57,015 as compared with the corresponding period of the previous year, and the working expenses increasing by only £1,709, a net increase of £55,306 thus resulting. For the period from April 1 to December 9, gross revenue was up by £108,920 and expenditure down by £44,113, leaving a net increase in revenue for these 8½ months of £153,033. Much of the improvement has been attributed to methods of administration and management following the establishment of a non-political board of control, some two years ago.

#### How Safe are the Railways?

The recent French railway disaster raised some question in New Zealand as to the safety of our own system, with the result that certain interesting information has been released for the assurance of the public. Few railway systems have more grades, curves, and bridges per mile. About half of the total mileage of the railway (3,320 miles) is constructed on grades steeper than 1 in 200, while one mile in every eleven is on a grade steeper than 1 in 50. Of the total mileage, nearly 6 per cent. consists of curves of 10 ch. radius or sharper, nearly 12 per cent. has curves of 15 ch. radius and under, while 26 per cent. of the total mileage is curved. The total length of bridges under the track on the New Zealand railways is 54½ miles. The standard gauge is 3 ft. 6 in. and 70 lb. rail is used throughout, with a few exceptions such as in tunnels and on bridges.

The large number of bridges and their length and height attracted particular attention when the safety features of the railways generally were considered. Steel bridges have become the standard for new construction, but for timber bridges constructed of ironbark the safety factor is 8. In some of these timber bridges not wholly constructed of ironbark, where there is a percentage of native (New Zealand) timber not having quite the strength of ironbark, the safety factor may run as high as 20. This is typical of the

standards of safety provided throughout the system. In the last eight years there has not been one fatality on the New Zealand railways due to any failure of the organisation or to any deficiency in the safety precautions taken, and in these eight years 180 million passengers have been carried.

### SPAIN

#### Collision at Villanueva de la Reina

A serious accident occurred on the M.Z.A. Madrid-Seville line on February 20.\* A football special, with the teams and visitors from Seville who had been to Madrid to see a football match there and were returning to Seville, met, in a head-on collision, the ordinary Seville-Madrid express, close to the station of Villanueva de la Reina near Cordoba, the line there being single. According to report, the excursion train ought to have stopped at Villanueva de la Reina for the express to pass, but it is alleged that, although the signals were against him, the driver disregarded them and ran forward into the section ahead, meeting the Seville express a few hundred yards from the station. Eleven persons were killed and over 40 injured, among those killed being the guard of the excursion train and one of the Civil Guards of the escort. Considerable damage was done to rolling stock, but the line was cleared by the following day.

#### Railways' Financial Difficulties

The Commission appointed by the Spanish Government to consider the co-ordination of road and rail transport and the railway problem as a whole, held a plenary session on February 15. The most important subject dealt with was the report of the sub-committee appointed to consider the urgent question of the alternatives, (1) a revision of tariffs, or (2) financial aid in order to tide the railways over the present period of depression. It was made clear by this sub-committee that some solution is urgently necessary, as not only have the principal companies experienced a year of fallen receipts and increasing

expenses, which will make it impossible for them to meet their first charges in full for 1933, but there are something like 20 small companies that are not covering their working expenses, and if something is not done very promptly a number of these small companies will be forced into bankruptcy, and the State will be obliged to take over the lines or leave them derelict. There was, however, a division of opinion on the essential point as to the extent of the increase in tariffs. The companies' representatives claimed that the Statute of 1924 should be put into force and that the tariffs should be revised to cover not only working expenses, and financial charges, but the return on the capital of the companies and on the capital of the State.

#### Views of the Public

The State delegates and the railway users, on the other hand, maintained that any tariff revision should be sufficient to cover only the working expenses and the first charges and that any other return on capital should be contingent on the results of good management on the part of the companies. It is quite possible that, in admitting that first charges should be met, the State representatives have been influenced by the fact that the Railwaymen's Provident Fund (Asociación de Empleados y Obreros de Ferrocarriles) has its funds invested largely in the debentures of the two principal railway companies. The question of the reserves of the principal companies also proved to be a bone of contention, as it was maintained by the State representatives that these reserves should be put back into the business as they really represent only an excess of revenue attributable to additions and improvements in the equipment paid for with State capital. As the railway representatives refused to recede in their attitude on this point, the report of the sub-committee consists mainly of two separate points of view, on which there is no possibility of any unanimous finding. It is understood that the matter has been submitted in this form to the Minister, who will in due course have to send it forward to the Cabinet with his own recommendations.

### BRAZIL

#### Central Brazil Railway

To remedy the overcrowding that took place during rush hours on the narrow gauge suburban lines of this railway, the train service has been augmented since February 1. It was found possible to increase the number of trains on the Auxiliar section from 33 to 40, in each direction, daily, and from 18 to 27 on the Rio d'Ouro section and to enable the average headway during rush-hours to be reduced to 15 min. on the former and to 30 min. on the latter. Taking into consideration the comparative shortage of rolling-stock, and the fact that the bulk

\* This was recorded briefly on page 311 in *The Railway Gazette* of February 23.—Ed. R.G.

of the distance run in each case is over a single track between stations, this is a very creditable move on the part of the Central Railway to meet heavy demands for passenger-accommodation, and it has been greatly appreciated by the travelling public.

#### Viação Ferra do Rio Grande do Sul

Work is proceeding apace, with a view to the completion of the branch which will eventually link up Alegrete (situated on the main line between Santa Maria and Uruguayana) with Quarahy, facing the town of Artigas in Uruguay, whereby access to Montevideo, by the Northern, Midland and Central Uruguay Railways will be possible. For several years the branch has been in service as far as Severino Ribeiro, a distance of 53 km. from Alegrete, and in order to hasten work upon the extension General Flores da Cunha, the Federal Interventor in Rio Grande do Sul, gave orders for detachments from three battalions of a military brigade to be employed on the construction. At the present time, roughly 15 kilometres of new road-bed are prepared for platelaying, the difficulty of the terrain handicapping the progress of the work considerably, and necessitating in many places extensive rock cuttings. It is expected that the rails will be through to Quarahy within two years.

### SWEDEN

#### Automatic Signalling in a Tramway Subway

An underground tramway, 1,440 metres long, from Skanstull to Slussen in the city of Stockholm, was opened on October 1 last. The line, on which automatic block signals have been installed, is served by ordinary street cars, access being by means of an incline at Skanstull. It was at first proposed to equip the line for either-direction working on both tracks, but this plan proved too expensive and accordingly ordinary double-line working was arranged for, with the Slussen terminal constructed as a loop station to avoid reversal. There are two intermediate stations, known as Ringvägen and Södra Bantorget, and an emergency cross-over near the former.

The track-circuits are a.c. with impedance bonds, the track relays of the double-element vane type, and the other relays single element. The colour light signals have two aspects, red and green, and the red light is proved burning behind each train by a special detection relay, so that if it is not displayed correctly the next signal in the rear cannot be cleared until the track is unoccupied up to the next signal which is working correctly. Special arrangements had to be made to signal the traffic at the entrance to the subway, where there is a tramway junction and an important street crossing. The latter is equipped with street traffic signals, controlled by the movement of the trams, and the junction facing

points also have a tram directing signal. From the controller's cabin at Slussen, where there is an illuminated diagram of the whole subway, a signal in the street at Skanstull can be kept at "stop," to prevent traffic from coming into the underground section if anything is wrong there. This also prevents the main street crossing from being blocked up in such circumstances.

The Slussen terminus is approached on a rather steep gradient, and as the terminal loop had to be of small radius it was thought advisable to put in safety points normally leading to a spur track. The points are worked by an electric motor and a time control device, so that they will reverse for a tram to enter the station only if it has not approached too rapidly since entering the track circuit in the rear. Local hand control of the points is also installed. Illuminated platform indicators are provided at the two intermediate stations, worked from the terminus and controlled by the trams as they pass over the track circuits. The apparatus for this signalling installation was supplied by Signalbolaget in association with the Ericsson Company.

### ARGENTINA

#### Rush of Holiday Traffic

In central and northern Argentina the temperature has been in the region of 90° and 100° F. during January. So great has been the rush of holiday traffic to the sea, the hills and to the Lake District that some railways have had difficulty in coping with it. Saturday and Sunday traffic to the riverside resorts in the vicinity of Buenos Aires has also been very heavy. The Central Argentine has issued to the Press a statement that on Sunday, January 28, traffic on the company's suburban lines broke all previous records, no fewer than 179,236 tickets being issued, and, in addition, there were large numbers of pass and season ticket holders travelling.

#### Agitation against Level Crossings

A mixed commission has been appointed to deal with the task of abolishing level crossings in Buenos Aires. It is remarkable that in a city of two and a quarter million inhabitants most of the lines running in and out of the metropolis still do so on the level. What was open country, when the lines were first laid, has given way to populous districts, and hardly a week passes without some fatal accident, nearly always due to the carelessness of road users. The railways are already too overburdened by taxation, reduced traffics and exchange troubles to have any capital to invest in high or low level schemes; the Government consider it is a matter for the Municipality, and the latter is proverbially impecunious, so that it is difficult to see where the money is coming from to pay for such schemes.

The matter is to be discussed at a conference at which the Municipality and the railway companies will be represented, as also the National Railway Board, and the Government of the Province of Buenos Aires. According to a resolution of the City Council of Buenos Aires, the conference is to prepare a general plan dealing with the technical and financial aspects of the matter, and in the meantime the Municipality is to refuse all permits for duplication of lines, rebuilding of stations, &c., on the Central Argentine, B.A. and Pacific, Central of B.A., Southern, Cordoba Central and Compañía General de la Provincia de Buenos Aires Railways.

### THE FAR EAST

#### Libraries on Trains in Manchukuo

Passengers who travel long distances, sometimes involving day and night journeys, to reach their destinations, will appreciate the consideration of the Board of Railways in Manchuria in providing for them portable train libraries available to all classes of the travelling public.

#### The Railways of China and Manchukuo

There are now about 7,500 route miles of line open for traffic in China and Manchukuo, mostly of the standard, 4 ft. 8½ in., gauge. The principal lines are as follow:—

- (1) Peiping-Mukden—845 miles.
- (2) South Manchuria—2,280 miles.
- (3) Chinese Eastern—1,081 miles, 5 ft. gauge.
- (4) Peiping-Hankow—823 miles.
- (5) Cheng-Tai—151 miles.
- (6) Peiping-Kalgan-Suiyuan-Paotou—547 miles.
- (7) Tientsin-Pukow—680 miles. Now part of the Peiping-Nanking-Shanghai through route.
- (8) Shanghai-Nanking—203 miles. Linked with (7) by train ferry at Nanking.
- (9) Shanghai-Hangchow-Ningpo—178 miles.
- (10) Canton-Kowloon—89 miles Chinese section, 22 miles British section.
- (11) Canton-Hankow—488 miles open and a 230-mile gap to be completed.
- (12) Lung-hai—557 miles.
- (13) Yunnan—Partly in French territory but 288 miles in China. Metre gauge.

#### Railway Staffs Provide Military Aeroplanes

Since the conflict in Manchuria there has been a marked increase in the interest taken in aviation in China and the aeroplane is generally recognised as a weapon of defence. At that time funds were obtained from various sources to provide aeroplanes for the Government, street collections being made for the purpose by one organisation. Two aeroplanes, purchased with funds collected from the staff of the Shanghai-Nanking and the Shanghai-Hangchow-Ningpo railways, have been



handed over to the Government after being named and making flights over the railway from Shanghai to Nanking and Shanghai to Hangchow. The first use of the aeroplane in civil strife in China is reported in the bombing of a city in the Fukien Province by National Government forces against the newly-formed independent government in Fukien.

#### Canton-Hankow remaining Link under Construction

This work, which is in difficult country, was referred to in THE RAILWAY GAZETTE of February 16. Its



Sketch map of the Chinese railways

position is shown on the map above, and on page 402 will be found a series of photographs depicting some of the earthworks and bridges which clearly show the topography negotiated. A photo is also reproduced of the motor bus garage forming the depot for the temporary road communications in the gap between railheads.

## GERMANY

### Bremerhaven-Bremen-Hamburg Express Service

According to *Hansa*, the German State Railway Company has decided not to develop the branch line Bremerhaven-Bremervörde-Buchholz as a main connection between Bremerhaven and Hamburg, owing to the heavy cost of the conversion. The Wesermünde (Bremerhaven)-Bremen-Hamburg line is, however, to be adapted as quickly as possible for speeds up to 130 km. (80.8 miles) an hour, thus reducing the journey time from Bremerhaven to Bremen to about 30 min., and that from Bremen to Hamburg to about 1 hour. The special trains of the Norddeutscher Lloyd and Hamburg-

Amerika Line will then be run jointly between Wesermünde and Bremen, the Hamburg section being there detached.

### Railways and the Berlin Motor Show

A feature of the International Automobile Exhibition being held in Berlin from March 8-18 will be a section showing the progress made in "motorising" the German State Railway, and methods of co-operation between rail and road. Exhibits in this section will include six commercial road vehicles of various types, among them a Doble steam wagon and another burning charcoal gas. The increasing use of internal combustion engines on the State Railway system will be shown by an exhibit of 15 to 20 motors used on small locomotives of from 30 to 420 h.p.

## SOUTH AFRICA

### Visit of Prince George

During his six-weeks' visit to South Africa, Prince George will travel over 4,000 miles, and for this purpose the Governor-General has placed his personal train—the White Train—at the disposal of the administration. The Royal train, which left Capetown on February 13, consists of one articulated saloon and one ordinary saloon conveying officials and staff, the twin dining car *Protea*, two private saloons for the accommodation of His Royal Highness and suite, and two stores and baggage vans. A pilot train, conveying the motor cars to be used by the Royal party, press representatives and officials, is being run thirty minutes ahead of the Royal train. No traffic movements are permitted between the passage of the two trains, and in every other respect everything possible is being done by the administration to ensure the safety and comfort of the Royal visitor and suite during their travels throughout the country.

### Help for Ex-railwaymen

A Select Committee has been appointed by the House of Assembly to deal with the petitions for relief from railwaymen prematurely retired during the depression, between 1930 and 1933. The number of railwaymen so retired numbered 2,976. Many of these men are in acute circumstances, and, recognising that they are the victims of unfortunate circumstances and are suffering for no fault of their own, the Government is putting aside "business principles" in the cause of humanity. Strict limits will, of course, have to be placed to any possible help, since it is impossible, for instance, to grant every man a pension equivalent to that which he would have drawn had he not been retired prematurely. It is equally impossible to re-employ all those who have suffered for the sake of economy. The maximum of the relief to be granted will be a pension equal to what the petitioner would have received if he had left the service

normally. Assistance will be further limited to men who are in real want, that is who are "on or below the bread-line," as Mr. Pirow, the Minister of Railways and Harbours, has put it. Of the 2,976 men retired, 1,716 were compulsorily retired, and from these only will petitions be considered. The Administration will endeavour to take back artisans—there are 793 of them who are willing to be received back as casual workers. An attempt is also to be made to help officials in similar straits who had retired voluntarily. They will be granted relief from the Benevolent Fund, and the Government will contribute £20,000 annually to meet the new demands.

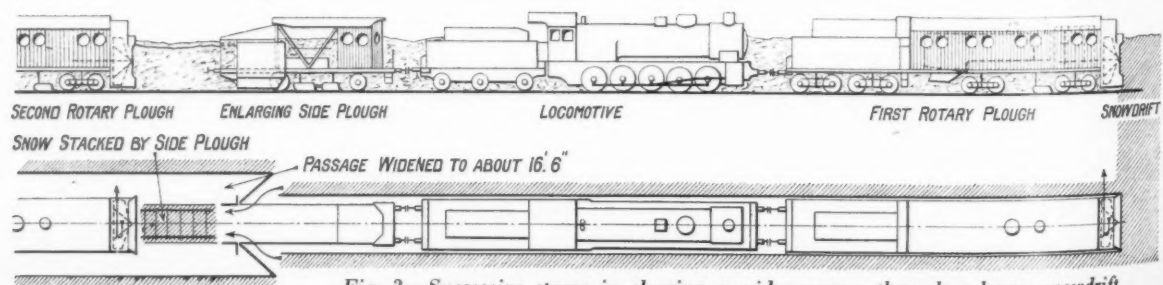
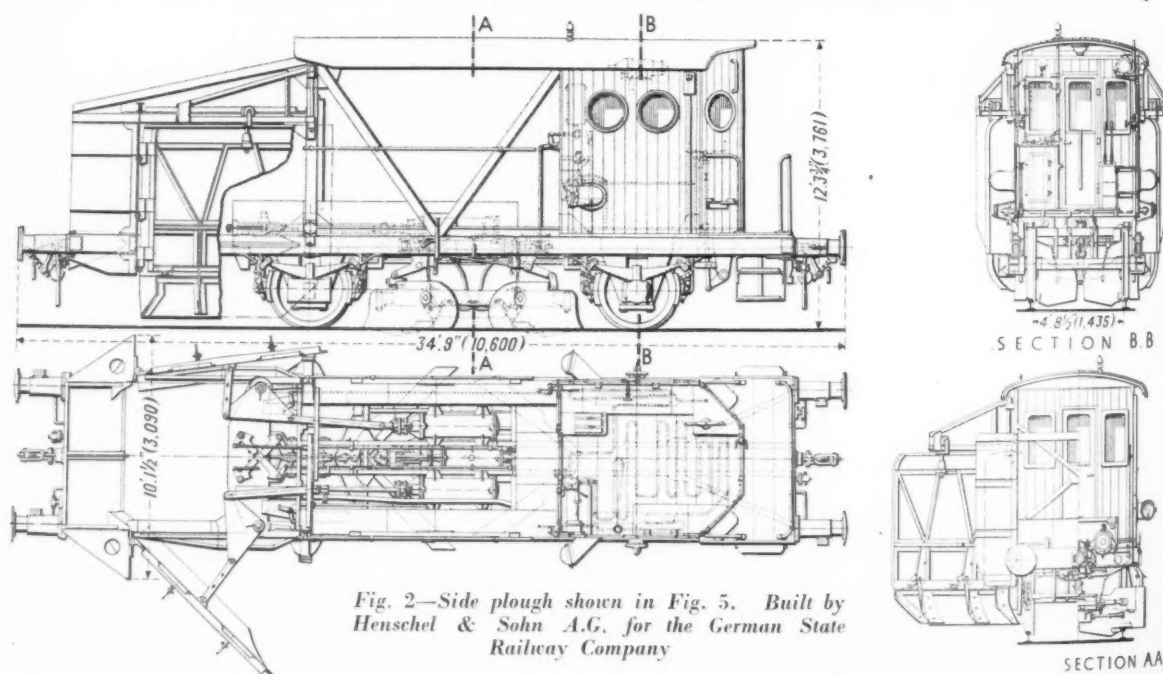
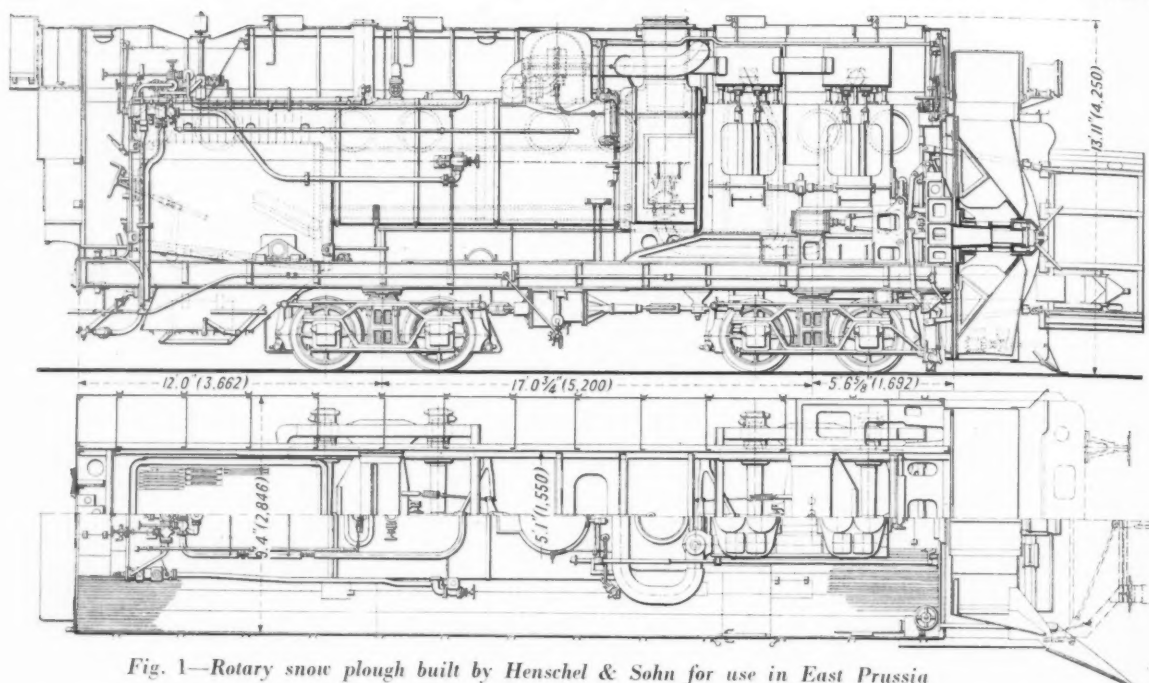
## ITALY

### Czecho-Adriatic Convention

The Czecho-Adriatic Railway Convention, which embraces the railways of Czechoslovakia, Yugoslavia, Austria, and Italy, met recently at Vienna to discuss the readjustment of tariffs from Czechoslovakia to Trieste. Representatives of the various Trieste steamship companies and of the Danube Steam Navigation Company were also present. Czechoslovak trade has always been a bone of contention between the North Sea ports and Trieste, and reference has repeatedly been made to this question which by its economic importance has a considerable bearing also on purely political grounds, and, at the present moment of Austro-Italian entente, this matter is very much to the fore. The necessity for tariff readjustments has become accentuated, as the Polish port of Gdynia, with its very low port charges, is a serious competitor to Trieste. The Austrian State Railways, which since 1928 have been entrusted with the management of the Convention, have again been so entrusted for another three years.

### Spring Tourist Concessions

In connection with the "Spring in Sicily" campaign, a new special passenger tariff from London via Calais, Boulogne, Dunkirk, Dieppe, and Havre to Agrigento, Catania, Palermo, Syracuse, and Taormina has come into and will be in force until June 30. The tickets represent a reduction of 50 per cent. on the Italian, 25 per cent. on the French and 30 per cent. on the Swiss lines. They are available for 45 days with the option of extension up to 90 days subject to a payment of 2 per cent. on the reduced Italian tariff for each further day, and of fixed amounts on the French and Swiss lines amounting to about 50s. for first and 30s. for second class from Chiasso to Boulogne. The "Spring in Sicily" tickets give holders the benefit of travelling everywhere in Sicily at 50 per cent. reduction. It is noteworthy that the honeymoon tickets to Rome instituted in 1932 have already exceeded 40,000, of which nearly 2,000 have been applied for from abroad.



## NOVEL GERMAN SNOW PLOUGHS

*The latest types of equipment for removing snow, as built by Henschel & Sohn A.G., Kassel, for the German State Railway and other Continental systems, are described*

*By Ober-Ing. BÖHMIG*

**P**OWERFUL machines are required to deal with the drifts, often 10 ft. or more in depth, resulting from the heavy snowfalls occurring in Eastern Germany and the Alpine countries. Rotary snow ploughs have been built in America, Sweden, and Germany for many years past, but recent constructions embody important improvements, and the latest developments are exemplified by Figs. 1 and 4, which show one of three machines built by Henschel & Sohn A.G., Kassel, for service on the East Prussian lines of the German State Railway Company. Formerly a horizontal two-cylinder steam engine was used to drive the thrower-wheel, which is about 9 ft. 6½ in. in diameter, but a vertical four-cylinder high-speed engine, with Marshall valve gear, is used in the new machines, thus eliminating the noisy cast steel bevel gears required by the horizontal engine.

The vertical engine of the new rotary plough runs at 500-550 r.p.m., and the axial thrust of the snow-wheel shaft is taken by a simple thrusting bearing. The wheel runs in a casing, which extends downwards and sideways close to the constructional gauge of the locomotive. Pairs of sharp knives are built on to the front of the wheel and interconnected so that the direction of cutting is reversed automatically by the pressure of the snow when the rotation of the wheel is reversed to throw snow to right or left of the track, as the case may be, the discharge openings at the top of the wheel casing being

changed at the same time. When working in a depth of about 10 ft., the wheel throws most of the snow to a distance of about 65 ft. on one side or other of the track (see Fig. 6). Side wings, the setting of which is adjusted by steam-operated gear (Fig. 2), enable a

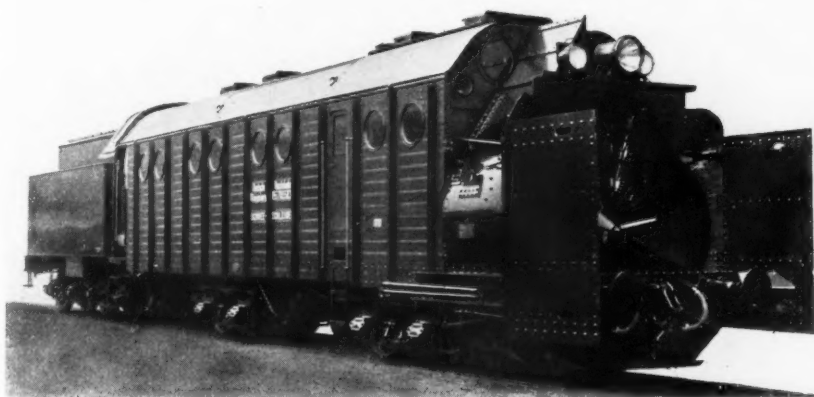


Fig. 4—Latest eight-wheeled rotary snow plough for use by the German State Railway Company in East Prussia

passage to be cut wider than the constructional gauge of the rolling stock, up to a maximum width of 5 metres (16 ft. 4½ in.).

The digging and throwing mechanisms are controlled from an enclosed cab in front of the boiler, the operator thus having a clear view of the track. Speaking tube and bell signalling may be used between the cab and the firing plate of the rotary plough, with whistle signals for the driver of the pushing locomotive, but visual and audible signalling of the ship's telegraph type is installed on the latest machines of the German State Railway for the transmission of all the orders regularly required between the cab and firing plate of the plough and the cab of the pushing locomotive.

At the front of the leading bogie, there is a track cleaner which can be lowered by steam to 30 mm. (1½ in.) below the top of the rails, and is arranged so that it can be left down at points, crossings and curves with check rails. If it strikes any obstacle, the track blade swings backwards after shearing a safety bolt.

Instead of using a steam-operated plough behind the leading bogie to remove snow left by the rotary plough, the

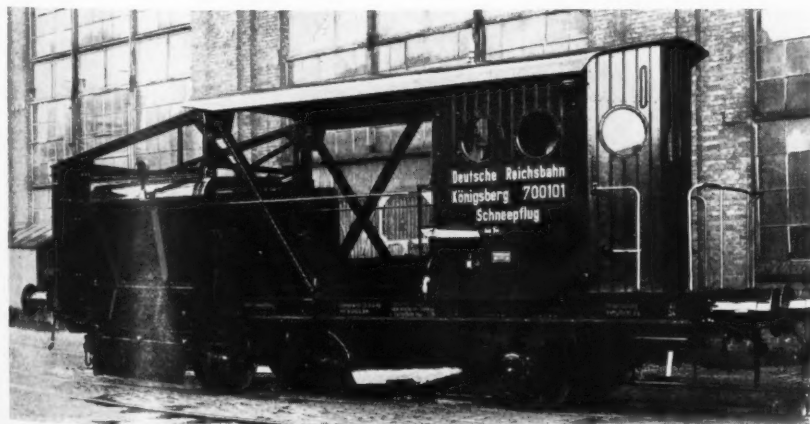


Fig. 5—Side plough for widening passages cut by rotary snow ploughs





Fig. 6—Rotary snow plough (as shown in Figs. 1 and 4) in action

latest machines on the German State Railway have a shovel attachment, fixed to the wheel casing and capable of being raised and lowered by steam, to remove snow down to the rail level and feed it to the thrower-wheel. In these machines, too, there is a speed regulator which prevents racing of the plough in the event of sudden unloading caused, for example, by breaking through a drift; the driver can set the maximum speed of the plough wheel at 120 or 160 r.p.m. by means of a hand lever altering the adjustment of a spring.

The boiler on the plough supplies steam only for the driving of the plough wheel and not for propulsion, one or more pushing locomotives being used as required for this purpose. There is a hand brake on the plough and compressed air or vacuum brakes operated from the pushing locomotive. In 10 ft. of freshly fallen snow, the rotary plough advances 5 or 6 km. (3.1—3.7 miles) an hour.

In addition to the three latest machines of this type in use by the German State Railway with vertical four-cylinder engines, there are 13 of the earlier pattern with horizontal two-cylinder engines in use in Bavaria, Austria, Switzerland, Turkey, Bulgaria and Yugoslavia.

#### Enlarging Ploughs

The side plough shown in Figs. 2 and 5 is designed to widen the passage cut by a rotary plough, which is not itself provided with side wings; and special attachments are provided to serve the further purpose of cleaning between the rails. This machine is hauled by the locomotive which pushes the rotary plough (see Fig. 3), and the snow cut from the walls of the first passage is stacked between the rails for removal by a second rotary plough. The weight of the machine, as shown in Fig. 2, is about 15,330 kg. (15 tons 1 cwt.); the side wings are adjustable to a maximum width of cutting equal to 5.5 m. (18 ft. 0½ in.). Four ploughs of this type were recently delivered for use on the Königsberg Division of the German State Rail-

way, by Henschel & Sohn, A.G., Kassel. A platform truck, built from standard components but to wheel base and other dimensions suiting the purpose in view, carries a special frame at the rear for the side plough. Two hinged wing plates are moved in or out as required, by means of a compressed air cylinder, adjustable stops being provided to limit the width of ploughing. Similarly, the depth can be adjusted to from 80 to 500 mm. (3¼ in. to 1 ft. 7¾ in.) above rail level by lowering or raising the bottom portion of the wing plates. Snow thus removed from the walls of the first cutting is forced between fixed guide plates and stacked between the rails (see Fig. 4), for removal by the second rotary plough. The rear axle boxes of the enlarging plough are protected against snow by casings as shown. In light snow, the side wings may be used as ploughs when running opposite to the normal direction.

A further attachment on this machine comprises a frame mounted between the axles, carrying two ploughshares for each direction of running, and capable of being moved through a vertical distance of 250 mm. (9¾ in.). Hardened horizontal inserts fix the position of the ploughshares with respect to the rail head (usually with ¼ to ⅜ in. clearance), adjustment being provided to allow for wheel wear. The two blades in each pair are pivoted at their forward end and forced apart at the other end by a spreading cylinder, which holds hardened steel pieces against the insides of the rail heads. Being thus located, the shape of the ploughshares is such as to clear grooves for the flanges and provide drainage grooves for the run-off of water produced by melting. A reversing cock admits air from the plough-lowering cylinder to whichever spreading cylinder corresponds to the direction of running.

When the ploughs are raised, their blades are automatically drawn together; and, when they are lowered, the working pair only is spread. These ploughs may not



Fig. 7—Klima snow plough in action, throwing snow to the left of the track

be lowered below rail level where there are guard rails, crossings or points.

Compressed air from the locomotive Knorr brake equipment can be used to operate the inter-rail ploughs and the side ploughs previously mentioned. All the plough controls and a hand brake are mounted in a cabin on the wagon, with a door at each end and with steam heating from the locomotive. Armoured hose can be connected to two steam cocks near the side ploughs for the purpose of cleaning the latter or thawing frozen parts. The remaining equipment includes signalling gear and electric lighting.

#### The Klima Snow Plough

Snow ploughs built under the patents of Herr Baurat Klima, of Salzburg, have been in use for some years on the Austrian Federal Railways and, on the basis of the operating experience there obtained, Henschel & Sohn, in

type weighing 3,400 kg. (3 tons 7 cwt.). The plough, which is attached to the buffer beam of the locomotive, comprises movable plates displaced as required by steam or compressed air cylinders acting against powerful spiral restoring springs; also, the fixed part of the plough forming a shelter or cabin for the operator. The main plates can be locked back to throw snow to both sides of the track, or they can be set in one plane for right or left-hand delivery as required. Shovel plates along the bottoms of the main plates can be adjusted to any position down to the rail level, and lifted about 200 mm. ( $7\frac{7}{8}$  in.) clear of the latter as required. Extension side plates, attached to the plough, can be swung out by air or steam cylinders to clear a width up to 4,100 mm. (13 ft. 5 $\frac{1}{2}$  in.) if desired.

The operator's cabin contains all the necessary controls; also, a spindle which enables the plough, resting



Fig. 8—Front view of Klima snow plough, type K.IV.S., with plates set to throw snow to the right of the track

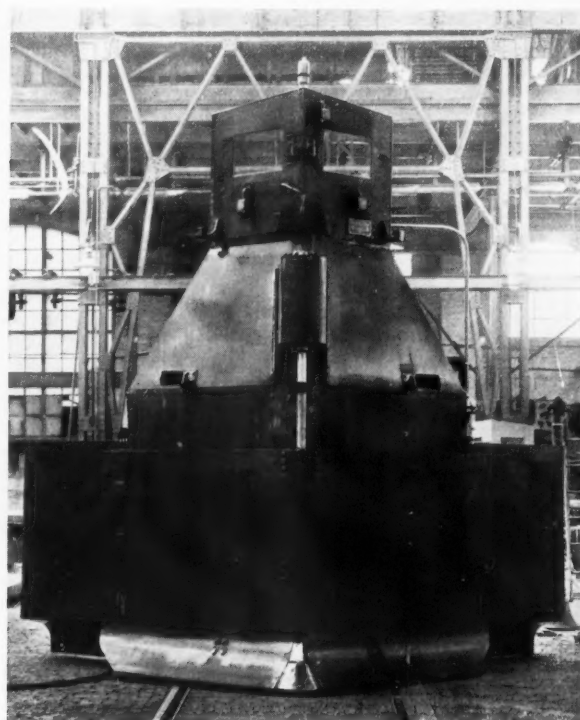


Fig. 9—Lighter Klima snow plough, type K.IV.L., with plates set for throwing snow to both sides of the track

conjunction with the German State Railway Company, have brought out improved machines of this type capable of clearing away drifts up to about 5 ft. in depth. According to the conditions of snow and weather, these ploughs can attain speeds up to 70 km. (43.5 miles) an hour, and they are specially suitable for work which does not require the use of a rotary plough. A length of track can be cleared and cleaned at maximum speed and minimum expense, using steam or compressed air for the operation of the plough, and mounting the latter on a steam or electric locomotive, with or without coupled load, according to circumstances. The risk of derailment is eliminated, even in heavy snow; and the easy observation and control of operations add to the reliability. Snow can be cleared to either side or both sides of the track as desired; and the setting of the plough plates can be altered while running, to suit the gradient.

Fig. 8 shows the heaviest Klima plough, the K.IV.S.

on the sleepers, to be lifted for attachment to the locomotive buffer beam, or turned through 180 degrees for attachment to the other end of the locomotive when a turntable is not available. Where the Knorr auxiliary brake is used, air for the plough can be taken from the main brake pipe of the locomotive, the latter being then braked by the auxiliary gear. No brake controls are placed in the plough cabin, communication with the driver being easily maintained by whistle signalling.

#### A Lighter Plough

A similar but lighter plough, type K.IV.L, weighing about 2,700 kg. (2 tons 13 cwt.) is suitable for use on branch lines and in light snow. This plough is distinguished by the use of swinging plates with fixed shovel attachments, capable of being lifted from 30 to 380 mm. ( $1\frac{1}{8}$  to  $14\frac{1}{8}$  in.) above the rail level. While still folding within a narrow structural gauge, this plough is capable

of clearing a great width. The first example of this new construction, recently delivered to the German State Railway, is shown in Fig. 9. If it is considered permissible to dispense with the advantage of double-sided clearing action, the plough can be built as type K.II, weighing about 2,300 kg. (2 tons 5 cwt.).

#### Track-Cleaning Machine

The shovel apparatus shown in Fig. 10 on the front of an electric locomotive is intended to follow the rotary or other main plough for the purpose of cleaning the rails and cutting clearance and drainage grooves between them. During the spring, when there is recurrent thawing and freezing of residual snow, with or without additional light falls, the machine can be used alone to keep the track open and clean. The shovels must, of course, be lifted at points, crossings and guard rails, but pistons exercising a side thrust keep the shovels against the rails on curves of any radius. Nozzles supplied with steam or compressed air remove snow from between the rail fixing bolts, where it is inaccessible to the cutters and shovels.

The controls for the apparatus are mounted behind a screen attached to the buffer beam of the locomotive. The valves provide for steam or compressed air connections as the case may be, an adjustable pressure-reducing valve being set to suit the prevailing conditions of snow. Fig. 10 shows the apparatus fitted to an electric locomotive of the Austrian Federal Railways. In the course of trial runs, speeds of 70 to 80 km. (43.5 to 49.7 miles) an hour were reached, and the satisfactory cleaning of the track was fully maintained on curves.



Fig. 10—Klima track cleaner fitted to an electric locomotive of the Austrian Federal Railways

## NEW AUTOMATIC AND MECHANICAL LUBRICATORS

*Two new types recently introduced by C. C. Wakefield & Co. Ltd. are specially adapted for railway workshop machinery*

TWO new lubricators have recently been introduced by C. C. Wakefield & Co. Ltd., whose mechanical lubricators for locomotives are well known and widely utilised. One of the new types is referred to as the Ayrlyne lubricator and is designed for use in railway and other engineering workshops, shipyards and, indeed, wherever compressed air equipment is installed. The lubricator is of simple design, sturdy construction and is reliable in action and is fitted direct to the machine to be

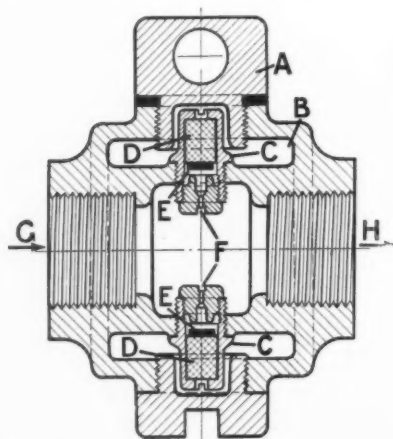
lubricated or in the air line itself. It is provided with a "breath" of oil of sufficient quantity to lubricate the moving parts efficiently, and so long as air is being passed through the lubricator oil will be delivered uniformly throughout the system. The drawing reproduced shows the general construction in section; the operation of the lubricator is as follows:—

The oil reservoir having been filled and the air pressure applied the felt plugs D and leather washers E are forced off their seatings, which latter are screwed into the cartridge C, thus allowing the oil in the reservoir B to feed past the felt plugs and leather washers to the outlets F and thence into the air passage where it is carried in an atomised state by the air to the parts to be lubricated.

In the past lubricators of this type have been subject to the disadvantage of flooding, due to the lubricator continuing to feed after the air pressure has been shut off. This objectionable feature has been eliminated in the improved pattern Ayrlyne lubricator so that no flooding occurs. As soon as the air is shut off the air pressure in the oil chamber B immediately forces the felt plugs and leather washers on to their seats, thus preventing oil feeding into the pipe line while the machine is not working.

#### A New Grease Lubricator

The Wakefield mechanical grease lubricator, also illustrated, is specially designed to feed a continuous supply



Wakefield Ayrlyne automatic lubricator for use with compressed air systems

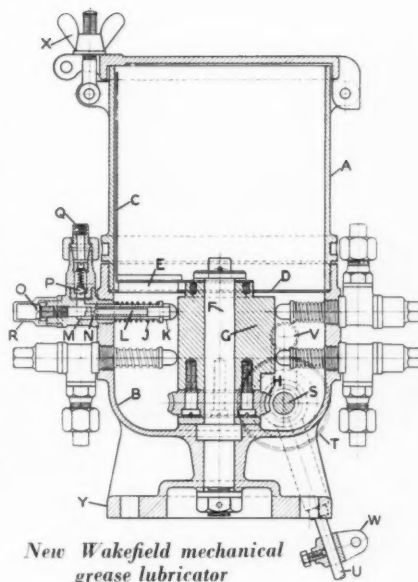
- A—Filler cap
- B—Oil reservoir
- C—Cartridges
- D—Felt plug
- E—Leather washer
- F—Oil outlets
- G—Air inlet
- H—Air outlet



of grease under pressure at a definite rate and is particularly applicable to heavy bearings in inaccessible positions in which grease lubrication is preferred. Here again the application is to the moving parts of stationary plant as distinct from locomotives. The lubricator is of robust construction and ample capacity and is designed to eliminate air pockets, the pump units being automatically self primed when grease of normal consistency is used.

The container A is filled with grease and the revolving scraper C which is fixed to the driving eccentric G and driven by worm reduction gear H and worm shaft S, forces the grease through the orifice E in the fixed plate D into the pump chamber B. When the pump plungers J are at the outer end of the suction stroke, grease is drawn from the chamber B through the ports K along the passage L into the pump barrel M. On the delivery stroke of the pump the ports N in the feed regulator are closed by the plunger J and the grease is forced away under pressure past the non-return valve P to the outlets Q to the point of application. To regulate the amount of feed the cap nut R is removed and the feed regulator O screwed back the required number of turns to obtain the reduction of feed. The lubricator is supplied with either ratchet or pulley drive fitted to the worm shaft S and any number of feeds up to 24 can be fitted.

- A-Grease container
- B-Pump chamber
- C-Revolving scraper
- D-Fixed plate
- E-Grease outlet from A to B
- F-Eccentric pin
- G-Driving eccentric
- H-Worm reduction gear
- J-Spring-returned pump plunger
- K-Port holes
- L-Grease passage
- M-Pump barrel
- N-Ports
- O-Feed regulator
- P-Non-return valve
- Q-Grease outlet
- R-Cap nut
- S-Worm shaft
- T-Ratchet wheel
- U-Driving arm
- V-Flushing handle
- W-Adjustable socket
- X-Flybolt
- Y-Fixing flange



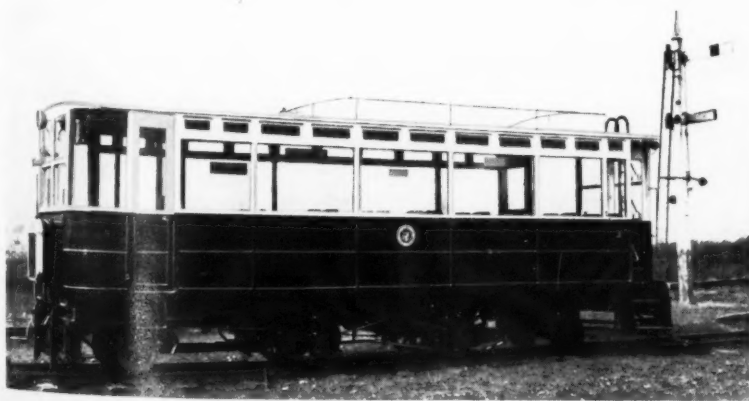
## CONVERTED PETROL RAILCAR, COUNTY DONEGAL RAILWAYS

*A former broad gauge vehicle adapted to narrow gauge*

THE railcar illustrated below was, for some years, running on the Dublin & Blessington Steam Tramway, now closed. It was recently purchased by the County Donegal Railways and the axles reduced from 5 ft. 3 in. to 3 ft. 0 in. gauge. The wooden seats were removed and replaced by modern bus seats for 40 passengers. Although built for a broad gauge line, it was not found necessary to alter the body dimensions. The car is fitted with a Drewry 35 h.p. four-cylinder petrol engine, driving from a centre cross shaft by chains to the axles of alternate wheels. The front and rear axles are fitted with pony trucks. Forward and reverse gears of equal speeds are provided. The gear ratios have been increased from a limit of 20 m.p.h. on the Blessington line to 35 m.p.h. on the Donegal Railways. Access to the engine is from floor level, and in addition to the large transverse

radiator, an auxiliary radiator, as shown, has been provided in front. Oil and water pumps are in use, and power for the electric light and horn, &c., and starter, is met by a 12-volt generator. This railcar, which weighs 6 tons unladen, runs remarkably steadily, with little vibration and noise, and by reason of the four-axle distribution of the load there is no unpleasant hammering at rail joints. It has proved a most useful addition to the fleet of light units now in service on the Donegal Railways, of which 12 are in use. Sixty per cent. of the total train mileage is worked by petrol and diesel railcars, thus enabling a frequent and speedy service to be provided. Stops are made anywhere along the track to set down or pick up passengers, and this method of meeting road competition has been greatly appreciated in the scattered district through which the railway runs. The extensive use of

railcars made by the County Donegal Railways Joint Committee was referred to in our *Diesel Railway Traction Supplement* dated December 1 last, when various types of diesel vehicle were illustrated. The first diesel railcar to be put into regular service in the British Isles was introduced on the 3-ft. gauge lines of this system in July, 1931. This vehicle, which was described in THE RAILWAY GAZETTE of October 2, 1931, has since covered over 85,000 miles. Its fellow, which was delivered in December of the same year, has a mileage of over 78,000 to its credit. These figures are even better than they seem, for the Strabane-Killybegs line, on which the cars are in service, has heavy grades, including a six-mile stretch at 1 in 50, and numerous curves.



*Former Dublin and Blessington railcar converted to narrow gauge*

## Building the Canton-Hankow Railway

(See pages 395 and 403)



*Earthworks in difficult but beautiful country. Note the unexcavated cones of earth in the left-hand picture indicating, for measuring up purposes, the original ground levels*



*Typical bridges: left, between Shaochow and Lochang; right, on the Shao-Lo section*



*A new bus terminal in Hunan for the temporary road communications over the unfinished section*

## RAILWAY NEWS SECTION

### PERSONAL

Sir Herbert Gibson, Bart., President of the Local Board of the Buenos Ayres Great Southern Railway, Chairman of the British Chamber of Commerce in the Argentine Republic, &c., has returned from a short trip to England.

We regret to record the recent death of Sir William Henry Crundall at the age of 87. He had been Chairman of the Dover Harbour Board since 1906, having been a Member since 1888, and Deputy Chairman 1901-06. He was also a Member and past President of the Dover Incorporated Chamber of Commerce.

#### CITY AND GUILDS ENGINEERING COLLEGE

The Fellowship of the City and Guilds of London Institute has been conferred by the Council of the Institute upon the following Associates:—

Sir John E. Thornycroft, K.B.E., Director of the Southern Railway Company, and

Mr. G. A. Hicks, Chief Engineer of the Burma Railways, who has recently been officiating as Agent.

#### L.M.S. APPOINTMENTS

The following appointments have been approved by the Directors:—

##### Chief Commercial and Chief Operating Managers' Departments

Mr. R. D. Roberts, District Goods and Passenger Manager, Swansea, to be Dock Superintendent, Garston.

Mr. C. H. Tait, District Goods and Passenger Manager, Abergavenny, to be District Goods and Passenger Manager, Swansea.

(The Swansea and Abergavenny Districts have been merged into one District with headquarters at Swansea, the combined District to be known as the South-West and Central Wales District.)

##### Chief Civil Engineer's Department

Mr. J. N. Peck, Assistant to Divisional Engineer, Manchester, to be District Engineer, Blackburn.

Mr. J. Elliott, Assistant to District Engineer, Barrow, to be Assistant to Divisional Engineer, Manchester.

Mr. F. Tiffany, Assistant to District Engineer, Manchester (Exchange), to be Assistant to District Engineer, Barrow.

Mr. C. M. A. Whitehouse, Chief Draughtsman, Manchester (Exchange), to be Assistant to District Engineer, Manchester (Exchange).

##### Rates and Taxes Department

Mr. W. Holmes, Chief Assistant, Glasgow, to be Divisional Rating Agent, Glasgow.

Mr. S. L. Glenn has resigned his position as Director and General Manager, British Power Railway Signal Co. Ltd., in order to become Managing Director of Railway Brakes Limited.

Mr. H. H. Ling, the Director and Engineer-in-Chief of the Yueh Han Railway, Chuchow-Shiuchow section, Canton Hankow Railway, is responsible for the construction of the remaining 230 miles of line which will close the gap still remaining in the main trunk rail connection between Canton, Hankow and northern China. As will



Mr. H. H. Ling.

Director and Engineer-in-Chief,  
Yueh Han Railway, Chuchow-Shiuchow section,  
Canton Hankow Railway

be seen from the photographs of the construction works reproduced opposite, the country traversed is of a difficult nature and much responsibility therefore attaches to Mr. Ling's post.

Mr. W. M. Neilson Reid, a late Director of the North British Locomotive Company Limited, left estate in Great Britain valued at £77,019.

M. Francisco Sisque, General Manager of the Rosario to Puerto Belgrano Railway, has returned from a trip to Europe, and resumed his duties in Rosario.

The Madrid, Saragossa & Alicante Railway Company announce the appointment of Señor Mariano Marfil, as a Director of the company. Señor Marfil is well known in Spanish banking circles, and is a leading figure in the Unión Económica, an organisation of employers' associations.

#### INDIAN RAILWAY STAFF CHANGES

Mr. J. C. Barton has been appointed as Deputy Traffic Manager, G.I.P. Railway, as from November 23, 1933.

Mr. C. F. White has been appointed to officiate as Deputy Chief Mechanical Engineer, G.I.P. Railway, as from November 11, vice Mr. A. J. Cracknell proceeded on 10 months' leave.

Mr. J. Royal has been appointed to officiate as Deputy Chief Accounts Officer, G.I.P. Railway, as from January 2.

Mr. B. C. L. Bean, Officiating Divisional Superintendent, N.W.R., has been granted leave for four months, as from January 10.

We regret to record the death, on March 7, of the Marquess of Aberdeen and Temair, G.C.M.G., G.C.V.O., K.T., in his 87th year. Lord Aberdeen joined the Board of the Great North of Scotland Railway in 1885 and was elected Deputy Chairman in 1900, which position he held until the end of 1905, when he retired from the Board upon his appointment as Lord-Lieutenant of Ireland for the second time. In more recent years Lord Aberdeen has continued his Trusteeship of the Railway Benevolent Institution and presided at the 71st anniversary dinner of the Institution in May, 1929. He had always been keenly interested in railways, as was made clear by Mr. Bruce Thomas, K.C., who proposed the Chairman's health at that dinner. He referred to his lordship's love for riding on the footplate when a boy and reminded his audience that he had for over 53 years been one of the Trustees of the Benevolent Institution, a Director of the G.N.S. for 20 years and that soon after he took his seat in the House of Lords, so long ago as 1873, he had served on the Select Committee on Block Signalling.

### Questions in Parliament

#### Display of Railway Station Names

Brigadier-General Nation (Hull, E.—C.) asked the Minister of Transport if he would consider the introduction of legislation whereby the names of railway stations should be more prominently displayed and more easily recognisable by travellers than at present.

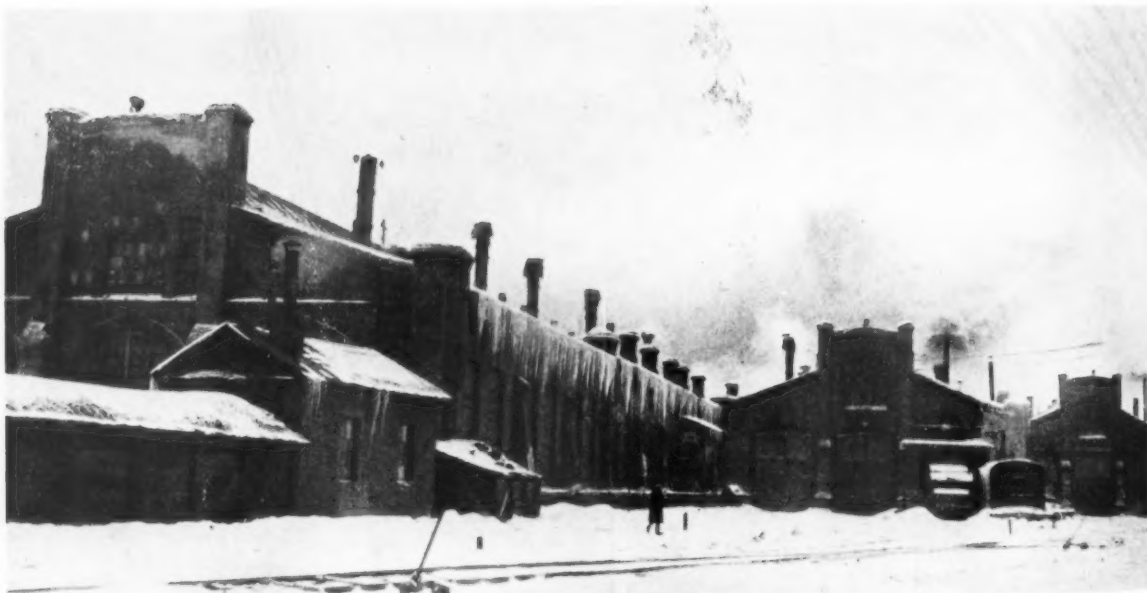
Mr. Oliver Stanley (Minister of Transport), in reply, said: I have no reason to think that legislation specifically relating to the display of railway station names is required, but if my hon. and gallant friend has in mind any case where he thinks an improvement in this respect is called for, I will bring it to the notice of the railway company concerned.



## Recent Railway Scenes in the U.S.S.R.



*Beyer-Garratt locomotive under test on the U.S.S.R. Railways with dynamometer car (temperature, 30° C.) near Sverdlovsk, Siberia*



*Sverdlovsk locomotive running shed where the Beyer-Garratt was stationed for two months for tests under Siberian winter conditions*



*Left :—0-10-0 type locomotive in the Perm district. Right :—Sverdlovsk station*

## Railways of the U.S.S.R.

Two papers of more than ordinary interest on Russian railway affairs have been read within recent months by Drs. C. D. Campbell and M. S. Miller, of the Department of Commerce, Liverpool University, and are probably the only authentic and first-hand British publications dealing with the position and achievements of the Soviet transportation system during and after the first Five-Year Plan.

In the first paper, "Railway Transportation in Soviet Russia," presented to the Manchester-Liverpool section of the Institute of Transport, the authors stress the advantage of having industry and agriculture planned ahead in such a way that the transportation authorities know the exact amount of traffic to be moved in the future, and can thus extend their system, adjust the rolling stock programme and working, and train new workers. The Russian railway system, like all economic organisations in the U.S.S.R., is controlled from the centre, but the Commissariat of Transport, in carrying out the policy of the Government, does not administer on purely commercial lines, for many of the railways are primarily of strategic importance. Vital industries as far as possible are concentrated at a great distance from the frontier; Moscow has been developed to a greater extent than Leningrad to prevent immediate chaos in the event of an attack by sea; and some lines are built with a view to military utilisation. Apart from these reservations, the rates and fares are drawn up to cover working expenses, but as there is no capital account (a system which obtains in British government departments), it is impossible to say whether any profit is made on the invested capital.

For purposes of administration there is a central all-union collegium, and 22 separate railways distributed as follow over the country:—

- |                     |                       |
|---------------------|-----------------------|
| 1. Southern.        | 12. South Western.    |
| 2. Catherine.       | 13. Western.          |
| 3. South Eastern.   | 14. Moscow-Baltic.    |
| 4. Moscow-Kursk and | 15. October.          |
| Moscow Circuit.     | 16. Murmansk.         |
| 5. Moscow-Kuzan.    | 17. Northern.         |
| 6. Samara-Zlatoust. | 18. Riazan-Uralsk.    |
| 7. Perm.            | 19. North Caucasus.   |
| 8. Omsk.            | 20. West Caucasus.    |
| 9. Tomsk.           | 21. Central Asia.     |
| 10. Baikal.         | 22. Turkestan-Siberia |
| 11. Ussurisk.       | (Turksib).            |

Each railway has a separate director and council, and enjoys almost complete operating autonomy, the whole system being an attempt to secure maximum efficiency over an enormous territory by means of decentralisation.

### State Planning

The body responsible for the organisation of the Five-Year Plans is known as Gosplan, and in every federal and autonomous republic, in every region and territory, and in every administrative district and town with a population of over 20,000, there are

planning commissions subject to the central office. Moreover, every Commissariat has a planning branch of its own, which, however, is under Gosplan. The Five-Year Plans originate with the Government, are sent on to Gosplan for broad limits and directions to be drawn up, and passed thence down the two main channels, the unit organisations getting nearer and nearer to actual conditions as the plan goes down. The various limitations and plans return up these channels to Gosplan, which co-ordinates the data obtained and draws up a formal scheme.

### Railway Progress

In 1925 the pre-war passenger traffic was exceeded by 22.7 per cent., and in 1927 the freight traffic exceeded that of 1913 by 5.7 per cent. As a result of the first Five-Year Plan, which actually extended only from October, 1928, to the end of 1932, the number of passengers carried rose to 345 per cent. of the 1928 figures, and the goods traffic increased to 250 per cent. Freight traffic increased due to the growing industrialisation of the country, and although the 1932 total was 171 per cent. that of 1928, the transportation of coal, oil, steel and other commodities of heavy industry rose by 100 per cent. According to the first Five-Year Plan, the goods traffic was to amount in 1929 to 97.0 billion tonne-km., and in 1932 to 139.8; actually the figures were 113.0 and 169.3 billion tonne-km. respectively, and even larger increases were recorded in the passenger traffic, where the anticipated figure of 32.5 billion passenger-km. was exceeded by 159 per cent.

Much of the increase in traffic is due to the extension of the railway system, about 4,000 miles of new line, mainly in outlying regions, being completed during the course of the first Five-Year Plan, and including such important lines as the Turksib Railway and the Troetsk-Orsk section. At the end of 1932 the mileage was 52,000, compared with 48,000 in 1928 and 36,500 in 1913. Nevertheless, a chronic shortage of transport facilities still exists, and this is largely due to labour troubles. Great laxity appears to have crept into the railway labour force, and the shortage of skilled workmen not only in transportation but also in the heavy industries, such as steel-making, has brought about very serious congestion, which it is sought to overcome by vigorous measures to increase diligence among the 1,540,000 railway employees.

With a view to increasing skilled labour, technical education has been taken up energetically, and although there is a serious shortage of suitable books and teachers, there were at the end of the first Five-Year Plan 20 railway universities providing instruction for 21,000 people, 110 middle technical schools with 48,600 students, and about 40 higher technical schools

attended by about 125,000 pupils. In addition, about 20,000 people were receiving technical education by correspondence, and ten base and 22 travelling railway clubs provided facilities for both social life and technical instruction of the railway servants.

Commenting upon the locomotive, wagon, and train mileage, the authors consider the Russian operating methods to be more akin to those found in North America, but in comparing the results the influences of the variations in climate and physical structure found in the largest single country in the world, and the lack of competition, must be borne in mind. Time, however, has hitherto been a factor of relatively small importance, and by virtue of the State monopoly the operator may accumulate traffic and fill his wagons. But a vital difference compared with other railways is that the long average haul welcomed by private corporations may, in Russia, be a source of economic waste to the community as a whole, and in a number of cases the Soviet authorities are making strenuous efforts to reduce the length of haul. In 1932 the average daily run of the freight locomotives actually in steam was 164.7 km. at a commercial train-speed of 14.3 km.p.h. and with a gross train load of 966 tons. The corresponding figures for passenger service were 251.0 km.; 31.5 km. (for long-distance trains); average axles per train, 38.

### General Transport

The second paper, by Drs. Campbell and Miller, was presented to the Railway Students' Association, and was entitled "Some Aspects of the Russian Transportation Problem." After presenting similar information on the railway system, the authors considered other forms of transport, particularly inland waterways. Numerous canals link up the head waters of large rivers and form a more or less connected system of inland navigation, and water journeys of no less than 2,800 miles from Astrakan to Archangel and 3,650 miles from Irbit to Kiatkha are possible. The total length of navigable waterways is 52,500 miles, 67,000,000 tonnes of craft are in use, and new schemes are being constantly advanced.

Road-making was one of the principal items of the first Five-Year Plan, and between 1928 and 1932 the length of metalled roads rose from 20,000 to 27,500 miles, and that of unmetalled roads from 5,600 to no less than 55,000 miles. Even this is not a large mileage considering the size of the country, and generally speaking the highways are in far from good condition. At the beginning of 1933 there were 73,000 automobiles in Russia, and although foreign cars were still being imported, about 70 per cent. of the total were of home manufacture. Transport being wholly in the hands of the State, co-ordination is ensured between the various forms, which include, at the moment, 19,000 miles of air lines; in 1932 these carried 31,600 passengers, 454 tons of mails, and 552 tons of freight.

## Lord Ashfield on the London Passenger Transport Problem

On Monday last, Lord Ashfield, Chairman of the London Passenger Transport Board, delivered the second of two public lectures on "Practical Aspects of the London Passenger Transport Problem" at the London School of Economics. The first lecture, given by Mr. Frank Pick, Vice Chairman of the board, on February 26, was summarised on page 380 of *THE RAILWAY GAZETTE* for last week. In the absence of Sir William Beveridge, Professor Arnold Plant presided.

Lord Ashfield, after prefacing his lecture by stating that he was not speaking on behalf of the board, said that the London Passenger Transport Act represented the culmination of many years of effort directed towards the unification of the separate transport agencies in London. As early as 1863 a Select Committee of the House of Lords had recommended that every system of railway communication for the Metropolis should be under one management, and since that time Royal Commissions, Select Committees of both Houses of Parliament, and numerous other committees as well as those directly engaged in the provision of transport, had urged a complete fusion of the many separate undertakings providing passenger transport in London. It was only after 70 years that the goal had finally been reached and the principle of unification was enshrined in the London Passenger Transport Act, 1933.

In dealing with the various passenger transport undertakings administered by the board, Lord Ashfield continued by saying that the board already owned 3,156 railway passenger cars for the operation of 227 route miles of railways; 5,312 omnibuses which operated over 2,259 miles of roadway; 2,518 tramcars which ran over 327 route miles of tramway; 459 motor coaches; 60 trolley buses; and numerous other miscellaneous vehicles. Moreover, there were still to come into the board's control some 200 more public service vehicles before the amalgamations were completed. The number of passengers carried by all these various means of transport in 1933 was about 3,500,000,000; the number of car miles run in that year was 500,000,000, which required 650,000,000 units of electricity and over 45,000,000 gallons of petrol and other fuel. The number of staff employed for the purpose of conducting these operations was roundly 72,000. The suburban lines of the main line railways carried roundly 500,000,000 passengers, with earnings of £10,000,000, in the London area. Altogether, therefore, the board and suburban lines would be responsible for 4,000,000,000 passengers, with aggregate earnings of roundly £36,500,000.

While all this mass of transport had been brought together and effectively

co-ordinated, he confessed that it had made little difference to the underlying financial position of local passenger transport, and he imagined it must have been noticed that the coming of the board had, in fact, made little change in the traffic situation. He did not say that the coming of the board would not make a radical change, but he had to affirm that the change would be slow; that there would be no revolutionary treatment of the traffic problem in any of its aspects; that the board enjoyed no more than the accumulated resources of the various undertakings that had been brought within its bounds; and that at the present time its financial strength was measured by the financial strength of its constituent bodies, and its enterprise was necessarily governed and limited by that strength. There was one feature of London transport which escaped attention because it was buried in the published results of the transport undertakings, but a large part of the provision of services in London transport was conducted on an unremunerative basis. So far as could be estimated, the whole of the underground and tube railways earned sufficient money to pay their working expenses, to set aside reasonable sums to meet depreciation and to provide for the renewal of their equipment, and after meeting the interest upon those of their securities which had a prior charge upon their revenues, had left a sum of money sufficient to pay little more than 1 per cent. upon the balance of the capital employed. The average return upon the whole capital was only  $\frac{3}{4}$  per cent. and no provision was made for the redemption of the capital invested in these railways. The position of the tramways was a little better. The combined tramway undertakings in London, after meeting working expenses, and making adequate provision for the renewal of the equipment employed, earned upon the capital invested in them a rate of interest of just over 4 per cent. Of the 220 million car miles which the omnibuses ran in a year, roundly 25 per cent. did not earn a revenue sufficient to meet in full the costs of their provision, and the sum required to meet the depreciation of the equipment.

An important point to be considered in any policy for dealing with the traffic problem of London was the remarkable fact that in recent years there had been a steady shift of industry into London. In the last 10 years almost 9,000 new factories had been established in and around Greater London, and the population had increased by some 750,000 persons in that decade. The two facts were correlated. The increase in population was due in part to natural growth, but it

was estimated that not fewer than 300,000 persons were immigrants into Greater London. This growth meant a demand for additional traffic facilities, for houses meant population and population meant passengers, and on top of this there was the extraordinary fact that as the total aggregation of people grew larger, so the total movement of the people as units of that population grew larger as well. In 1903 the movement was at the rate of 166 rides per head of the population in the year, while in 1933 it was at the rate of 457 rides per head of the population, an increase of 175 per cent.

Turning to the question of capital and new works, Lord Ashfield revealed that on the whole of the capital invested, not only in underground railways but in all the separate undertakings providing passenger transport in London prior to the establishment of the board, it was estimated that the average return earned even in the best years was only 4 per cent., and this return was unequally apportioned over the several means of transport. This did not include the capital employed in the suburban lines of the main line railway companies. It was impossible, he added, for the separate undertakings to continue to provide adequate services for the increasing development of London on so slender a financial basis, and for that reason if for no other, the unification of all the separate undertakings under the board was justified. If the board could secure for its own benefit additional traffic without increase in the car mileage which it now provided, the net revenue from every additional 30,000,000 passengers, on the basis of the present average fare of 1.87d. would be equivalent to 1 per cent. upon its C stock.

In the north-east sector of London there was, continued Lord Ashfield, a traffic problem which required a solution, and which would seem to involve a large number of works, such as the electrification of the Great Eastern section of the L.N.E.R., the continuation of the Central London Railway, and the carrying out of improvements to the Central London end of new works on the District Railway at and near Whitechapel, for the increase of the train service to Barking and Upminster. The total expenditure would be about £18,000,000, which would involve a charge for interest of not less than £800,000. In connection with these works, the main-line railway companies were directly interested with the board, and some share of the burden would fall upon them. It must, however, be manifest to all that until the board had established itself in a satisfactory position, knowing what its income was, and what its capital obligations were, it would be imprudent for it to venture upon any major scheme of expansion such as the treatment of the north-east sector of London demanded. It was worth while, he thought, to look at this



problem of the north-east sector of London in more detail. In less than a quarter of a century the population had increased by something like 33 per cent., one result of which had been the development of the outer area, and with a class of people which travelled very largely for business purposes only. This had created heavy traffic loads at the peak hours and far too light traffic loads at the slack hours. On the Upminster line, for example, same 40 per cent. of the total daily traffic in either direction was carried within a single hour, and on the Great Eastern line to Shenfield, some 35 per cent. of the total daily traffic in either direction was carried within a single hour. The highest percentage of movement for a single hour elsewhere on the Underground was 26 per cent. This entailed the provision of traffic facilities which had to be supported almost wholly out of a peak hour movement.

Concerning fares, Lord Ashfield said that there was a contradiction of policy about the current treatment of fares. Concessions were granted to the regular traveller for one set of reasons, and parallel concessions were granted to the occasional traveller for another set of reasons. Between the two the transport undertaking moved uneasily. The time was ripe for scientific research into the right basis of fares so as to permit of the maximum movement of passengers.

Certain burdens which bear very heavily upon the resources of the board were then mentioned by Lord Ashfield. The board, he said, had to pay, apart from income tax, sums amounting roundly to £2,500,000 per annum, either by way of rates to the local authorities, or by way of licence duties, partly to the Road Fund and partly to the Central Exchequer, or by way of petrol tax. This meant that 10 per cent. of the board's gross revenues was taken away at the start. Clearly the board could not, in the discharge of its duty as a tax collector, also properly discharge its duty as a provider of transport. He did not dispute that vehicles using the streets should pay a proper sum for the upkeep and maintenance of the streets which they used, but the taxation of surface transport in London had gone far beyond that, and the passengers of London were being deliberately taxed just as though they were going to an entertainment. Again, the board's motor coach services were restricted, both as regards the use of streets in the central area of London and the points where the coaches might stop both to pick up and set down passengers in the outer area. This had resulted in a loss of about £200,000 a year to the board.

**BELFAST & COUNTY DOWN WAGES.**—The Irish Railway Wages Board has granted the application from the Belfast & County Down Railway Company for the continuance of the 10 per cent. reduction in wages and salaries which has been in operation for employees of the company since November, 1927.

## Sir Robert Horne's First Message to G.W.R. Staff

Sir Robert S. Horne, the new Chairman of the Great Western Railway Company, has addressed the following personal message to the staff:—

"The honour has fallen to me of being chosen by my colleagues to succeed Lord Churchill as Chairman of the company, and in that capacity I desire to send a message to all who work for the Great Western.

"We belong to a great service and inherit a high tradition. Next year the Great Western will be a hundred years old. Throughout the century of its activity the railway has created for itself a reputation which reflects the esteem it has earned in the country. Amid the confusion of recent changes, through which other railways have become merged in amalgamated systems, we have preserved our identity and the Great Western under its own

original name occupies a unique place in the kindly affections of a vast number of travellers and traders. It is for us to maintain and perpetuate the renown of the past and add, if we can, new lustre to the future.

"As Chairman, I recognise that I have a special responsibility. I succeed one who was deservedly held in high regard and deep affection by the whole staff over which he presided. Lord Churchill infused into our organisation a spirit of comradeship which made for good team-work throughout the whole system. If I can help to keep alive this happy devotion to the great service to which we belong and in which we take an honourable pride, I shall count myself fortunate. The loyalty of the Great Western men has been cherished and prized by every chairman of the company. On my part I shall do my utmost to deserve and keep it."

## G.W.R. Chief Goods Manager's Dinner

The annual staff dinner of the Chief Goods Manager's Office, Great Western Railway, took place on Friday, March 2, at the Holborn Restaurant, under the chairmanship of Mr. A. Maynard, Chief Goods Manager. A representative gathering assembled, and amongst distinguished visitors were Messrs. R. Cope, R. Carpmal, H. Wheeler, F. R. Potter, C. R. Dashwood, K. W. C. Grand and G. J. Walker.

Mr. S. F. Westcott, of the Mineral Department, proposed the toast of "The Chief Goods Manager and the Chief Goods Manager's Office," and referred to the high regard and esteem in which Mr. Maynard was held by the staff.

Mr. Maynard, responding, in a speech characterised by reasoned optimism, referred to the better conditions generally obtaining, and thanked sincerely the whole of the staff for their capable and ready assistance in the work of the department, which, with new problems ever arising, became increasingly difficult. An analogy quoted was the working of a great machine, of which, while perhaps he might be virtually the "starting handle," the real measure of success depended upon the efficient and smooth working of the component parts representing the various sections of the organisation.

Mr. F. W. Lampitt proposed the toast of "The Visitors," and expressed on behalf of the department great pleasure at such an excellent attendance of other officers and assistants—a support at the dinner which was typical of that rendered daily in the working of the organisation.

Mr. K. W. C. Grand, in a humorous speech, voiced thanks on behalf of the visitors for a most enjoyable evening.

Mr. H. W. Payne proposed the toast

of "The Retired Members," giving an amusing commentary evolved on their names and erstwhile idiosyncrasies, which evoked continuous merriment. Mr. H. G. Meldrum, formerly of Newgate Street D.G.M.O., in replying for the retired members, expressed their delight at the opportunity of meeting old friends. An excellent musical programme followed, and the evening concluded with a vote of thanks to the secretary of the dinner, Mr. H. Colbourn, and the dinner committee.

**L.N.E.R. GOODWILL REPRESENTATIVES.**—During the four months, September-December, 1933, the scheme tried in the North Eastern area of the L.N.E.R. of employing 22 district representatives, each with a 10-cwt. van, to obtain better liaison with customers with whom contact was previously very difficult, firmly established itself and secured new business. The Leeds, Middlesbrough, and Newcastle districts each have six vans, Hull has three, and West Hartlepool one. The six in the Leeds district, for example, are stationed at York, Harrogate, Thirsk, Leeds, Selby, and Malton. The representatives reside in their divisions and spend most of their time supervising the motor work of individual rail-heads so that motor service timings and routes can be adjusted to suit fluctuating requirements. The vans are smartly painted in a distinctive livery of green with gold lettering, and although it is not intended that they should carry traffic, except in an emergency, a little collection and delivery work has been performed in the process of making personal contact with farmers, business firms, estate agents and others in localities difficult of access by the local station staffs.

## SOUTHERN RAILWAY COMPANY

*Improved net receipts—Increasing passenger traffic—Electrification justified  
—Effect of Summer tickets—Recovery of cross-Channel traffic—Through  
trains to Paris—London Passenger Transport—Southampton developments*

The annual general meeting of the Southern Railway Company was held at Southern House, Cannon Street station, E.C.4, on Thursday, March 1, Mr. Gerald Loder (Chairman of the company) presiding.

The Secretary (Mr. F. H. Willis) read the notice convening the meeting.

The Chairman said:—

Ladies and gentlemen, I assume you will take the report and accounts as read.

You will recollect that when addressing you a year ago I had to deplore a continuous fall in receipts during 1932. It is gratifying to meet you to-day in happier and more encouraging circumstances. The downward trend has been arrested, and the year 1933 shows a recovery, as marked as it is welcome. True, much leeway has yet to be made up before anything like normal conditions can be said to have been regained. Meanwhile, I can only reiterate the sympathy I expressed last year with the deferred stockholder, whose sacrifice and patience are ever present to the board.

How far the recovery is to be attributed to one cause or another is largely a matter of opinion. It is evident, however, that the improvement in trade and the return of a measure of confidence in the business outlook have provided the public with more money to spend. Railways are generally very fair barometers of the rise and fall of the people's means.

Next, as we all know, 1933 was favoured by an exceptionally fine and protracted summer, a highly advantageous factor in the case of a railway whose main business lies in the conveyance of passengers. Then we had eight months' experience of that bold experiment of introducing what as known as Summer tickets. The full effect of this experiment could not be accurately gauged at the end of the year, but enough can be deduced from eight months' experience to justify a longer trial, and it has therefore been decided to continue the issue of these tickets throughout the whole of 1934. Lastly, from some striking figures which I shall give you presently, it will be seen that the Southern Railway is entitled to attribute a handsome share of its increased revenue to the extension of electrification.

### Increased Revenue for the Year

I now propose to run briefly through the accounts, drawing your attention to the more important points. Taking the capital account first, capital receipts remain as before, except that the last instalment of the 4 per cent. redeemable debenture stock issued in October, 1932, which was not due till January, 1933, increases the amount received in respect of that stock by £1,458,962, bringing it up to the full amount of the issue, namely, £4,750,000.

Capital expenditure for the year, after allowing for certain credits, amounted to £1,197,000, the principal items being £111,000 for the electrification of lines, and £1,079,000 for the dock extensions at Southampton. It will be remembered that the Government are for some years making a grant towards the interest on the Southampton extensions.

Passing to the revenue account, you will be pleased to notice that there is an improvement in the net receipts not only under the head of railway working, but also in steamboats, docks, and every other heading, including rents and interest. As regards the railway working account, gross receipts were higher by £173,000, whilst expenditure was reduced by £203,000, giving an increase in net receipts from railway traffic of £376,000. The chief increases in the net receipts of ancillary businesses are:—

Steamboats .. .. .	£ 65,000
Southampton docks .. .. .	25,000
Other docks .. .. .	5,000
Collection and delivery .. .. .	48,000

Together the net receipts from the railway and ancillary businesses show an increase of £526,000.

Miscellaneous receipts are higher by £120,000, including £65,000 for general interest and £48,000 in respect of grants received from the Government under the Development (Loan Guarantees and Grants) Act, 1929, to which I alluded just now. The increase in net revenue therefore amounts to £646,000. Against this must be set an extra outgoing of £190,000 in debenture interest, owing to the inclusion of a full year's interest on the 4 per cent. redeemable debenture stock issued in October, 1932. The balance brought forward from 1932 was £207,000, or £114,000 more than in the previous year, so that after making provision for the dividend on the preference stocks there remains a sum of £1,052,525 available for dividend on the ordinary stock, or £569,000 more than the amount available in the year 1932. This enables us to recommend a dividend of 3 per cent. on the preferred ordinary stock, with an increase in the carry forward of £18,000.

It is interesting and instructive to cast a glance back as we did last year over a period of years, and to compare 1933 with 1927. Whilst the gross receipts from the railway and ancillary businesses are lower by £4,474,000 or 16½ per cent., we have, on the other hand, reduced expenditure by no less than £3,814,000 or 17½ per cent. This reduction in expenditure, I think you will agree, is a most satisfactory feature, especially in view of the fact that in 1933 we had to meet the cost of carrying 26,000,000 more passengers than in 1927. These savings have, moreover, been achieved without any loss of efficiency or lowering the standard of maintenance. On the contrary, we are satisfied that in both of these respects we are better equipped than ever before, and our officers are to be congratulated upon the economies that have been effected.

### Savings by Signalling and Water Softeners

To some extent, the economies are the outcome of the expenditure devoted in recent years to the carrying out of works for the improvement and modernising of our undertaking. As a striking example of what has been accomplished in this way, I may mention the installation of up-to-date methods of signalling which have enabled us to close more than two hundred signal boxes and to effect a saving of some £90,000 a year in the cost of signalling.

Again, for some years past we have been adding to the number of water-softening plants at our locomotive depots. A new plant at Ramsgate, where the water is exceptionally hard, has just been put into operation, and those in course of erection at the Hither Green and Longhedge depots will shortly be in service. We shall realise a further considerable economy by installing these softeners, as the use of treated water reduces the cost of maintaining locomotive boilers and renders engines less liable to failure due to tube and other boiler troubles. I could give you other instances of judicious expenditure producing savings.

### Satisfactory Electrification Results

The expansion in our revenue from passenger train traffic during the year 1933 is very welcome. Of the increase of £321,000 no less than £150,000 was earned by the new electric services which began to operate on January 1, 1933, when the extension of the electrification of the railway from Three Bridges to Brighton and Worthing was brought into use. The success of that scheme has been most gratifying. During the year the number of passengers carried between London and Brighton alone increased by 520,000, and altogether we carried 2,213,000 more passengers in the newly electrified area, an advance of no less than 23 per cent. in the first year of electrical operation. I am glad to say the improvement in

traffic still continues, for in January last we carried 110,000 more passengers in this particular area than we did in January, 1933.

In view of the great success of the electrification to Brighton and Worthing your board feel fully justified in extending it to Seaford, Eastbourne and Hastings, via Lewes, and there is every reason to hope for similar good results from this extension. As mentioned in the report we are also proceeding with the extension of the electrification from Bickley and Orpington to Sevenoaks, serving an area of rapidly increasing residential building.

Taking the line throughout, we carried altogether 324,327,000 passengers in 1933 as compared with 317,129,000 in 1932. The number of passengers conveyed between London and every one of the seaside resorts that we serve increased appreciably. As I have already said, railway travel was no doubt influenced by the very fine weather we enjoyed last summer, by the greater spending power of the public, and also by the introduction of Summer tickets in May last. As you know, these are return tickets issued at the rate of a penny a mile, and are available between all our busy centres, subject to certain minima. This reduction of 33½ per cent. in our standard long-distance fares was, as I have said, a bold experiment, but I am glad to say the public responded to the lower fares, and part of the large addition to the number of our passengers can rightly be attributed to this cause.

Our goods train receipts show a reduction of £154,000. About one-half of this is in the higher class goods traffic and the other half is in coal, coke and patent fuel traffic. The first decrease reflects the falling off in trade that was very pronounced in the first half of the year; the other is no doubt partly due to the diminished demand for household coal during the fine weather last summer.

The increase of £65,000 in the steamboat net receipts is also very welcome and points to the fact that we are gradually recovering the traffic which was lost in 1931 and 1932 as a result of the financial crisis, and adverse exchanges. Notwithstanding more intensive competition by air, we carried 174,000 more passengers by our own cross-Channel and Channel Islands services, and there was also an increase of 44,000 passengers carried by the Ostend and Dunkirk services. The effect of tariffs, however, is still being felt very severely by our Continental goods traffic, and it is sincerely to be hoped that before long it will be possible for the international restrictions which are so detrimental to trade to be relaxed.

#### Southampton Docks

The increase in the net revenue at Southampton Docks is, as I mentioned just now, £25,000. It is very gratifying to note that in spite of the acute depression in the shipping industry, Southampton shows an increase under all three heads, namely, ships' tonnage, passengers and goods.

The work in connection with the development of the docks is proceeding according to programme and, as you will remember, His Majesty The King honoured us by opening the new graving dock last July and naming it the King George V Graving Dock. It was brought into use for the first time by the entrance of the *Majestic* for overhaul in January. The dock will be finally completed at a cost of about a quarter of a million less than was estimated, and owing to the financial assistance we are receiving from the Government under the Development (Loan Guarantees and Grants) Act, 1929, we anticipate that it is not likely to be a burden upon our revenue, as compared with the existing floating dock.

In this connection I need hardly say that your board views with lively satisfaction the successful conclusion of the arrangement recently arrived at between the Government and the great Transatlantic shipping companies. This will ensure the early resumption of work on the giant liner suspended two years ago, and we may now look forward to its completion within a measurable time. This is naturally most welcome to the leading passenger port of the country, hastening, as it will, the more ample use of the new graving dock, and the fuller employment of the extended quays and warehouses.

Part of the new quay wall which, when completed, will

extend over a length of 7,000 ft., was brought into use last May, and had it not been for the additional quay space thus made available we should have been unable to accommodate certain vessels which offered themselves during the summer season. The remainder of the quay wall is now practically completed, and we hope to finish the reclamation and have the necessary sheds and railway lines in working order by the end of next year. We shall then be in a position to take any shipping that offers, and we are quite satisfied that the expenditure that has been incurred at Southampton will more than justify itself, both directly as a docks proposition, and indirectly as a feeder to the railway.

#### Development of Reclaimed Land

When the reclamation is complete we shall have available for building development on the new docks extension estate an area of no less than 130 acres, and this will form a very valuable asset, not only from the point of view of rent, but also from the point of view of traffic. The first factory to be erected on the reclaimed land is already nearing completion. This comprises a flour mill and silos built by Joseph Rank Limited, which occupy an area of approximately 2 acres. It will undoubtedly be one of the most important group of industrial premises on the estate. It is anticipated that actual milling operations will be commenced this summer, and the mill, which has a storage capacity for 15,000 tons of grain, is intended to act as a distribution centre for the South of England.

As the reclamation work on the estate progresses we are pursuing an active campaign to bring to the notice of the commercial community Southampton's potentialities for industrial development. Publicity is being directed especially to the remarkably advantageous situation of the new docks industrial sites, with their invaluable direct access by deep water, rail and road. It is probably not realised that within a radius of 100 miles of Southampton there is a population of 16,000,000, or more than one third of the population of the United Kingdom.

The mid-week and week-end cruises from Southampton by the company's steamer *St. Briac* to Havre, Rouen, &c., inaugurated in 1932, were again well patronised, and an augmented programme has been arranged for this year commencing at Easter.

We have been carefully watching the development of transport by air, particularly its present and potential effect upon our traffic. We are already suffering from a diversion of our cross-Channel traffic, particularly between London and Paris, and to a small extent in our Channel Islands traffic, and the time has arrived when some definite action should be taken to protect our interests. In co-operation with the other main line railway companies and Imperial Airways we have decided to make the necessary arrangements for providing, if need be, such air transport services as we and the other railway companies may think fit to establish, and I wish to assure you that everything possible will be done in this direction to safeguard your interests.

#### Channel Train Ferry

In my speech last year I referred at some length to the proposed Channel ferry service for goods traffic between this country and France. Since then, considerable progress has been made with the building of the ferry boats and the construction of the port terminals. We hope to have the service running between Dover and Dunkirk by the summer of 1935. We are at present in negotiation with the International Sleeping Car Company for the running of a night service of sleeping cars between London and Paris via the ferry, an innovation which it is thought will become popular, especially amongst business men.

You will gather from the report that the four main line railway companies have acquired, for the purpose of co-ordinating rail and road services for parcels and goods, the businesses of Carter Paterson and of Pickfords and their subsidiaries, by purchasing in equal proportions the whole of the ordinary share capital and practically all the preference shares of these companies. The cost to each of the railway companies amounts to £545,000. The railway companies are satisfied that they will not only earn a good



return upon this investment but that the acquisition of these businesses will be a great advantage from a traffic point of view and will lead to considerable economies in cartage expenses.

#### New Works in 1933

I should like to draw your attention to a few of the more important works mentioned in the report which have been completed or taken in hand during the year. To meet the needs of a growing population a new station, named Berrylands, has been opened between Malden and Surbiton. The reconstruction and improvement of Queen Street station, Exeter (now called Exeter Central) was completed and opened on July 1. Southampton West station is being reconstructed and a new overbridge will displace the public level crossing at the east end of that station. The rebuilding of Tonbridge station, with the object of improving the alignment of the railway so that existing speed restrictions may be relaxed, has been commenced, and at Dartford station very necessary improvements are being carried out, including the provision of luggage lifts. During the past year sheds have been provided for traders at a number of stations for the storage of goods carried by rail, and a large shed of this type has recently been brought into use at Southampton Terminus station. The new locomotive depot at Hither Green was opened in September.

I should, perhaps, mention that during the past year the Superannuation Fund for our clerical and supervisory staff has, in accordance with the Act of Parliament constituting it, been subjected to its first quinquennial actuarial investigation. The Actuary in his report recommended an increase of the company's annual contributions to the fund with the object of securing its actuarial solvency. This recommendation has been accepted and adopted by the board, and the extra contribution for 1933 accounts for the addition to the expenditure under the heading of Superannuation and Benevolent Funds, &c.

#### The London Passenger Transport Board

I must now refer to two Acts affecting railways which have been passed by Parliament since we met a year ago. The first is the London Passenger Transport Act, which received the Royal Assent last April. I mentioned last year that the provisions of the Bill would safeguard the company's interests and that we were hoping it would soon be passed. The provisions I referred to were those which deal with the co-ordination of the services of the Transport Board with the suburban services of the four main line railways, and the establishment of a scheme for the pooling of the whole of the passenger receipts of such services as from July 1, 1933.

In accordance with the Act a Joint Committee has been established consisting of four representatives of the Transport Board and the four General Managers of the railways. This committee is now actively engaged in dealing with matters of co-operation in the provision of passenger services, proposals for new and improved works, through bookings, more economical working and so on. There can be no doubt that as time goes on the labours of the committee, which is a permanent one, will lead to advantages for the travelling public in the direction of improved services and advantages for the stockholders in the direction of the avoidance of competition and overlapping.

The Joint Committee is also preparing the details of the pooling scheme. This is a matter of vital importance to the Southern Railway, as our passenger receipts concerned in the pool amount to between £5½ and 6 million a year—nearly half our total receipts from passengers. The preparation of the scheme is proving a most difficult task, owing to the diversity and complexity of the problems encountered in settling the disposition of annual receipts amounting to some £35 million. Owing to these difficulties and the magnitude of the financial considerations involved, the preparation of the scheme cannot be unduly hurried, and I am afraid that several months may yet elapse before it is possible for it to be presented to the Arbitration Tribunal for confirmation.

The second measure is the Road and Rail Traffic Act, 1933, some of the provisions of which came into force on January 1. The Act makes provision for regulating the

carriage of goods on roads by motor vehicles, and for controlling the use of such vehicles. What is of more importance to railway companies in so far as road competition is concerned is that it gives us a far greater measure of freedom in the matter of the rates chargeable for the conveyance of merchandise by rail or by rail and road. Railways now have the right to make any charge that may be agreed with a trader for the carriage of his merchandise, provided the charge and conditions attaching thereto receive the approval of the Railway Rates Tribunal.

#### Draft Valuation Roll

A matter of moment to us as ratepayers, and one to which your board is giving serious attention, is the settlement by the Railway Assessment Authority which was constituted by the Railways (Valuation for Rating) Act 1930, of the draft Valuation Roll relating to the company's undertaking. The matter is rather technical, but as some of you may know, the method of valuation for rate assessment purposes which has hitherto obtained in this country (but not in Scotland) was to value each part of the railway parochially, this being done by the various local rating authorities. This process necessitated the ascertainment of the gross receipts and working expenses attributable to each separate parish, and from those figures an estimate was made of the rateable value of the railway in the parish.

The object of the Act of 1930 is to do away with these parochial assessments, and it is the duty of the central authority set up by that Act—the Railway Assessment Authority—to make a cumulo valuation of the undertaking of each railway company as a whole, the valuation being made by reference to the company's net receipts. The authority then has to apportion the value amongst the various parishes throughout the system. The draft Valuation Roll which has been settled by the authority would, if applied, result in a considerable increase in the existing assessments, and the company has given notice of objection to the valuation. The matter is now *sub judice*, but we are taking all requisite steps for the safeguarding of the company's interests.

I do not propose to deal at any length with what I may call the reconstruction of the National Wages Board, the situation which has arisen having been explained in my speech last year, and I need only mention that negotiations are proceeding between representatives of the companies and their employees in a spirit which leads us to hope that before long machinery acceptable to all concerned will be devised for settling such differences as may arise.

Mr. Henry Mansbridge has been elected to a seat on the board. Mr. Mansbridge is a Director of the Proprietors of Hay's Wharf and subsidiary companies. His experience will be of the greatest value to the Southern Railway at the present time, when we are taking over, with the other main line railway companies, the business of two of the largest and best known cartage firms in the country.

#### The Outlook

The year 1933, whatever else it will be remembered for, will surely stand out as one in which far-reaching steps were taken towards the co-ordination and unification of transport. I need only point to the Salter Report and its outcome, the Road and Rail Act; the London Passenger Transport Act, with its important consequences; the merger with the carting interests, and lastly (though not directly affecting the Southern Railway), the pooling agreements between the other main line railways. The circumstances of the times in which we live have rendered the changes involved in these measures imperative.

In transport we are passing from an age of uneconomic and even wasteful competition to an age of co-operation, necessary alike in the interests of economy and of administration. That these changes will not only conduce to improved services for the public, but to better returns for shareholders, cannot be doubted.

That, I think, concludes all I have to say about our activities during the past year. As regards the future, it is perhaps more hazardous to forecast with any confidence in railway affairs than in most others. So much depends upon circumstances over which we have no control, and it must be borne in mind that we cannot count on reductions in the

total expenditure as have occurred in recent years, but the present year has opened auspiciously in so far as receipts are concerned, the first two months showing a modest but encouraging increase of £90,000 in railway traffic. We therefore start the year with a sense of thankfulness and relief that the worst of the depression has passed, and with fair reason to hope that the recovery which we record to-day may be accelerated, increased, and maintained.

In conclusion, I ask you to join with the board in paying a tribute to our General Manager, our officers, and our staff throughout the service. I do this in no formal or perfunctory spirit. They have, in times of stress and anxiety, given of their best. Any success that has been achieved has been largely due to the determined manner in which they have met the exigencies of the situation through which we have been passing.

I beg to move: "That the report of the directors and statement of accounts for the year 1933 be and the same are hereby received and adopted."

Mr. Robert Holland-Martin, C.B. (Deputy Chairman), seconded the resolution.

#### Remarks of Shareholders

Lt.-Commander Inglefield congratulated the Chairman on the improved results and on the developments which had increased the earning power of the company. He was also grateful for the replies in the Chairman's speech to questions put by the British Railway Stockholders' Union. He regretted, however, that the Summer tickets had not been so fully extended on this railway as on the others. The trend of modern business was for a standardised article obtainable everywhere, every weekday, for the same price. Owing to the number of short distances on this railway, in which buses could make nearly as quick journeys as the railway, there must be some inducement such as fares cheaper than, or as cheap as, those of the buses for people to travel by train. Regarding the joint office in New York of "Associated British Railways (Inc.)," he was of opinion that instead of reducing the New York offices from four to one it would have been better to have had four joint offices of Associated British Railways—one in New York and three in other parts of Canada and the United States. He would appeal in support of the suggestion made by the Chairman of the Union, Sir Charles Stuart-Williams at the L.M.S. meeting, for a round table conference of the railways, shipping and the heavy industries, to consider a scheme to promote export trade and encourage the British railways and British shipping.

Mr. Leslie Boyce considered the report and accounts very satisfactory having regard to the depressed state of the country's trade during the first six months of 1933, and also to the intensive and very one-sided road competition which the railways had had to meet. Critics should be reminded that some ten years ago the railway companies applied to Parliament for power to operate road services, and that their Bill had to be withdrawn at that time because of the restrictions imposed by the Minister of Transport. He hoped that the provisions relating to road transport which had been incorporated during the past year in the Road and Rail Transport Act on the regulatory side and in the Finance Act on the fiscal side would be adequate to give the railways fair play in the future and be the prelude to real co-ordination between the two forms of transport. The railways had certainly got in early in respect of air transport. Had it not been for the progressive and courageous policy of the board in proceeding with schemes of electrification during the period of depression and despite it, there would have been no dividend payable on the preferred ordinary stock either last year or this year. He would suggest to the board to consider the advisability of having one common research organisation for the whole of the British railways.

Sir George Penny expressed his pleasure that this company was in a position to pay dividends out of earnings, due, in a very great measure, to the great economies effected during past years and the ever-increasing efficiency brought to bear on the undertaking. He was delighted to know that it was intended to progress further with electrification, but he hoped that besides extending it to the seaboard on the east, the board would also extend it a little to the west

so as to go as far as from Worthing to Bognor. The board might perhaps consider the speeding-up of the goods service so as to secure more traffic in high-class goods. He was very pleased to note the foresight shown in building stations in new residential areas.

Mr. Wiltshire suggested that some arrangement should be made to relieve his business premises at Clapham Junction of the pressure of people coming to his entrance thinking it was the entrance to the railway station. At Croydon the company had put up a very fine row of shops on the archway over the railway, and he thought Victoria Station might be covered in and shops built on the top.

Mr. Plant did not like to have quite so much economy in information, and urged that a copy of the complete report and accounts be sent to every shareholder. More use should also be made of the daily press for continuous advertising. He also asked that the London Passenger Transport Board be approached with a view to the provision of some through traffic facilities from the north of London to Victoria.

Mr. Chalk congratulated the directors and the management on the successful results achieved and on the loyalty and co-operation of the staff.

Mr. Greig contrasted the earnings of £775,000 from first class fares with those of £7,872,000 from third class, which were eleven times as much. A reasonable reduction in first class fares would induce more passengers to travel first class and might double the revenue therefrom. The company should itself take over the hotels and catering. He wondered why it was necessary to carry forward so large an amount as £225,000. Provision of garage accommodation at Woking for the benefit of passengers who brought their cars there and went by train was a matter which might be considered.

Mr. Chamberlain held that the great future of railways in this country could only come about by the unification of all the railway systems. He expected enormous savings to result from sweeping away the Railway Clearing House, to say nothing of the reduction of unwieldy boards of directors and the large number of officers engaged in railway administration.

Mr. Farquharson recommended selling a number of non-paying lines, and running bus services along their sites, which would provide better roads with better gradients than those which the buses now had to use.

#### Chairman's Reply

The Chairman: Before I put the resolution, I hope you will allow me to express my thanks, and the thanks of the board, not only for the kindly tone of the remarks which have been made by various speakers, but also for the numerous very valuable suggestions which have come from them, and which I can assure you, if I do not reply to them in detail, will not be altogether lost sight of.

I cannot, of course, answer the whole of the questions which have been put. It would take up too much of your time. Lt.-Commander Inglefield asked why Summer tickets were not on quite the same footing in the Southern Railway as they are in other railways. The answer is that our circumstances differ from those of other railways. All of them have limits to fares, and you must remember that the Southern Railway has a very large proportion of its passenger traffic within the suburban area, where, of course, the limit tells. I have forgotten for the moment what the limit is, but I think it is 4s. or 4s. 6d., and, of course, that precludes a great many stations from enjoying the advantage of Summer tickets. It is true that all the four railway companies are joining in establishing a joint office in New York, and I may say that the same thing has been done, and is an accomplished fact, in Paris, and we hope that that will tend to the advantage of all the railways. What he asked about British export trade was that we should call a conference of shipping interests, railway interests, and the heavy industries. I had not heard of it before, but, of course, a proposal of that kind, coming from the Stockholders' Union, will naturally receive consideration.

Turning to Mr. Leslie Boyce, I should like to take this opportunity of thanking him and those associated with him for the assistance which he gave to the railway companies and to railway interests generally in the passage through Parliament of the important Acts to which I referred. We appre-

ciate that very much. Also, his suggestion about co-ordinating research departments will be taken into consideration.

Sir George Penny expressed a desire which is very widely felt, and which we are very glad to see expressed, namely, he would like to see electrification extended to the west of our system, as we are extending it at the moment to the east; of course, we must go by steps. If the next step meets with the same success as that from London to Brighton and to the suburbs, I have no doubt that before very long there will be a possibility of considering the extension of electrification to Bognor, Chichester, and even further west.

Passing to what Mr. Wiltshire said about Clapham Junction, I suppose we may call that the most famous junction in the world; but we should all like to see it improved, and what he suggests will be considered. We are not blind to the drawbacks of Clapham Junction station any more than we are to its advantages, and what he has said will be considered.

Somebody asked about the full report being circulated. The shorter report is being circulated in the interests of economy. Only one of the four great railway companies sends out its report in full to everybody, but, as you know, every shareholder who requires a full report is at liberty to have one supplied to him. In the meantime, we have our abbreviated report and accounts, which we think is not only much more economical, but much more intelligible to the average stockholder.

Mr. Greig raised an important question of which, of course, we are aware, about the great difference there is between first class and other fares. This matter has been receiving close attention for some time past, and we, in conjunction with the other main line railway companies, have recently appointed a committee to investigate the whole question and to report from two standpoints: first, the reduction of existing fares; and, secondly, the elimination, either wholly or partly, of first class bookings. The problem is not an easy one, as you will realise when I tell you that to make good a reduction of 10 per cent. in our first class fares it would be necessary to secure an increase of 33 per cent. in our first class bookings.

I think those are all the more important questions. With regard to the matter raised by Mr. Chamberlain, all I can say about unifying all railways is that I do not know whether that will come just yet; and as to getting rid of the unwieldy boards of directors, all I can say is that your humble board is the smallest of all the railway boards in this kingdom, so I hope that we do not come into that category.

I think those are all the questions which I need answer, but if I have overlooked any, I can assure you they will not be overlooked by the board when they come to consider the proposals which have been made.

The resolution was put and carried unanimously.

The Chairman: I will now ask the Secretary to read the resolution as to the declaration of dividends.

The Secretary (Mr. F. H. Willis): "That the following dividends be and the same are hereby declared: For the half-year to December 31, 1933; 2½ per cent. on the 5 per cent. guaranteed preference stock; 2½ per cent. on the 5 per cent. redeemable guaranteed preference stock (1957); 2½ per cent. on the 5 per cent. preference stock; 2½ per cent. on the 5 per cent. redeemable preference stock (1964); (making in each case, with the interim dividends, 5 per cent. for the whole year). 3 per cent. on the preferred ordinary stock for the whole year. And that such dividends be payable (subject to income tax) on March 6, 1934."

The Chairman: I beg to move that.

The Deputy Chairman (Mr. R. Holland-Martin): I beg to second that.

The resolution was put and carried unanimously.

The Deputy Chairman: I beg to move: "That the following Directors, who retire by rotation at this meeting, namely, Mr. Gerald W. E. Loder, the Right Hon. Lord Clinton, Sir Francis H. Dent, Mr. Henry Mansbridge, and the Right Hon. Lord Rockley, be and they are hereby elected Directors of the company."

Sir Charles Morgan (Director): I beg to second that resolution.

The resolution was put and carried unanimously.

Mr. Chalk: Mr. Chairman, my Lords, ladies and gentlemen, it affords me very much pleasure to propose the re-election of Mr. Arthur Pelham Ford, as Auditor to the Southern Railway.

Mr. Morrice Edwards: Mr. Chairman, I have much pleasure in seconding that resolution.

The resolution was put and carried unanimously.

### Special Matter

The Chairman: Now, ladies and gentlemen, we come to the special matter of which notice has been given in the advertisement convening the meeting. It relates to the Salisbury Railway and Market House Company's line—2 furlongs, 20 yards in length—which extends from the Market House and joins our railway at Salisbury. For many years this short piece of line has been worked by the Southern Railway Company under agreement renewed from time to time (usually every ten years), and we now ask you to approve of the present agreement, which expires on June 30 next, being continued for another ten years from July 1, 1934, on the same terms as have obtained for many years past, except that the rent payable by the company is now slightly reduced.

I beg to move: "That this meeting approves the making of a renewed agreement between the Company and the Salisbury Railway and Market House Company for the working and management by the Company of that company's railway for a period of 10 years from July 1, 1934."

The Deputy Chairman: I beg to second that.

The resolution was put and carried unanimously.

The Chairman: That concludes the business of the annual meeting.

### SPECIAL GENERAL (WHARNCLIFFE) MEETING

The Chairman: We now hold the Special General (Wharncliffe) Meeting to consider the Company's Bill in Parliament. I will call upon the Secretary to read the notice convening the meeting.

The Secretary: "Notice is hereby given that the Special General (Wharncliffe) Meeting of the proprietors of the Southern Railway will be held at Southern House (Cannon Street Station), in the City of London, on Thursday, March 1, 1934, at 12.30 p.m. (or as soon thereafter as the annual general meeting of the proprietors, to be held at 11.30 a.m. on the same day, is concluded or adjourned), when the following Bill intended to be presented to Parliament will be submitted for the consideration and, if thought fit, approval of the proprietors, viz:

A Bill to empower the Southern Railway Company to construct works and acquire lands; to extend the time for the compulsory purchase of certain lands; to confer further powers upon the West London Extension Railway Company; and for other purposes."

F. H. WILLIS,  
Secretary

Waterloo Station, London.

February 12, 1934."

The Chairman: Ladies and gentlemen, the principal objects of this Bill, as explained in the circular which has been sent to each proprietor, are to obtain powers to construct a new railway between Folkestone and Abbotscliff, near Dover, and to acquire lands for sub-stations for the electrification to Sevenoaks and to Eastbourne and Hastings; to confirm an agreement between the company and the Padstow Harbour Commissioners; and to extend the powers of the West London Extension Railway Company (of which the Southern Railway Company are part owners) in regard to the purchase, disposal and development of lands.

I will now ask the Secretary to read the resolution which I shall have to submit to you.

The Secretary: "That this meeting having considered the Bill intended to be presented to Parliament, intitled, 'A Bill to empower the Southern Railway Company to construct works and acquire lands; to extend the time for the compulsory purchase of certain lands; to confer further powers upon the West London Extension Railway Company; and for



other purposes,' approves thereof with such modifications (if any) as may be agreed to by the directors and sanctioned by Parliament."

The Chairman: I move that.

The Deputy Chairman: I have much pleasure in seconding that.

The resolution was put and carried unanimously.

Lt.-Commander Inglefield: Ladies and gentlemen, I think, before we leave, we ought to pass a very hearty vote of thanks to the Chairman for presiding at this meeting and at the previous meeting, and to the Directors for all the work that they have done. I hope some shareholder will kindly second that.

Mr. Morrice Edwards: I will have very much pleasure in seconding that, and in congratulating the board upon a very successful showing. It must be a delight to the Chairman, after very many years, to have taken the chair of this company at a time when there is some hope of

real improvement. I should like—and I am sure my fellow-proprietors will agree with me—to suggest that we might extend our thanks to the staff, both at the head office and on the whole of the line. I am quite sure that the General Manager will be among the first to recognise the very valuable and wholehearted assistance which he has received from them all. (Applause.)

Lt.-Commander Inglefield: Ladies and gentlemen, I ask you to pass a very hearty vote of thanks to the Chairman, to the Directors, to the General Manager, and to the staff, by acclamation.

The resolution was put and carried with acclamation.

The Chairman: I thank you very warmly, ladies and gentlemen, for the vote which you have just passed. I am especially glad that you have included our officers and staff in that, and on their behalf also I have to thank you. I hope that we may meet next year in equally happy and perhaps better circumstances.

## BELFAST & COUNTY DOWN RAILWAY COMPANY

The ordinary general meeting of the Belfast & County Down Railway Company was held at Queen's Quay station, Belfast, on Tuesday, February 27, Mr. Thomas Richardson (Chairman of the company) presiding.

The Chairman, in moving the adoption of the report and accounts, said he was pleased to be able to tell shareholders that the board had again been able considerably to reduce their working expenses of the past year, and although there was little, if any, improvement in trade and industry, and notwithstanding that their traffic receipts continued steadily to decline during almost the entire period, they had emerged from the difficulties of the year with rather better financial results than could have been anticipated.

Their gross receipts from all sources amounted to £205,915 and were £5,100 or 2.42 per cent. less than in 1932, and their expenditure was £189,887, being £6,600 or 3.36 per cent. less than in the corresponding period, leaving a balance of £16,028 which, when added to £585 brought forward, left a surplus of £16,613 as compared with £16,149 in 1932. After deducting their fixed charges and the interest on their 3 per cent. and 4 per cent. debenture stocks, together with the dividend on their  $4\frac{1}{2}$  per cent. "A" preference stocks for the second half of the year, they had at their disposal a balance of £1,049, which it was proposed should be carried forward to the current year's accounts.

Although they were not involved in the disastrous strike which took place on the other railways in the north of Ireland last year, they had suffered from what he might term "repercussions," such as the loss of cross-Channel and other through traffics and also some local traffic, which he regretted to say had been permanently diverted to the roads in consequence of the stoppage.

The most serious cause of the reduction in their goods and livestock traffic was, however, undoubtedly the uncontrolled road motor competition which existed in all parts of County Down. Since they last met, the directors, in conjunction with the boards of the other local railways, had made strong representations to the Government of Northern Ireland on the subject and he was pleased to say that a Bill was shortly to be laid before Parliament, which, when passed into law would, he hoped, meet the necessities of the case and have the effect, not alone of restoring to the railways a portion of the traffic which had been diverted from them, but also of reducing the number of lorries operating on their roads, and thereby tend to minimise the huge total of those who were killed and injured as a result of the numerous road accidents in which so many of the lorries were involved.

Referring to the fact that a Bill is to be introduced in the next session of Parliament dealing with the harbour at Donaghadee, the Chairman said he sincerely trusted that no course of action would be taken which would be detrimental to the interests of the company or of those who were at present employed in connection with the coal trade which existed there.

The Slieve Donard Hotel and the refreshment rooms had had a fairly satisfactory year, the profits from same, at £3,133, being £1,245 in excess of the previous year, which he thought reflected well on their new hotel manager, Mr. Ashcroft. There was little doubt, however, that this department would be able to show much more favourable results if there could be some relaxation of the licensing restrictions, which were deterring many visitors and tourists from visiting the better class hotels in Northern Ireland, and which were the cause of intense irritation and annoyance to hotel residents. He noted that legislation was at present under consideration in the Imperial House of Commons with the object of providing for the grant of special licences carrying special privileges for bona fide hotels and restaurants. If such privileges could be extended to the tourist and residential hotels in the North of Ireland he felt assured there would be a material increase in the number of tourists and holiday-makers who would visit their seaside resorts, with a corresponding benefit to the North of Ireland generally.

Those shareholders who followed the weekly returns of their railway traffic, which were published in the local papers, would probably have noticed the improvements in the company's receipts which had taken place since the commencement of this year. The increases were small, and they were spread over every class of both goods and passenger traffic and were a pleasant change from the continually recurrent decreases of the previous years, and were an indication of improving trading conditions.

The fact that for the last eight months the British railways had been enjoying very largely increased earnings was a sure and certain sign of a revival of trade and industry in Great Britain, and there was a general feeling of confidence that the dark clouds of trade depression which had been hanging over the country for the last ten years had at last broken up and that better times were ahead.

In Belfast and the North of Ireland also there were marked indications of improved trade and business generally. For many years he had been pessimistic as to the future of their once prosperous little railway, but on that occasion he was happier in his mind as he could not but feel that there was now a reasonable prospect of a recovery, in course of time, to some measure of its former prosperity, but he would like to accentuate the words "in course of time," since it must be readily understood that it would require several years of greatly improved conditions to overcome the ill effects of the very lean years through which they had recently passed, and during which they had been practically struggling for existence.

Before sitting down he wished, on behalf of the directors, to pay a tribute of gratitude and thanks to their General Manager, and to each and everyone of their officers and staff for their loyal and conscientious services during a year which had been by no means free from difficulties and anxiety.

The resolution was agreed to.

## LONDON & NORTH EASTERN RAILWAY COMPANY

*Summer tickets—Co-operation in road haulage of goods  
—Tourist trains—Steamship and land cruises—Fishing  
and fruit traffic—First class fares—Revival of industry*

The eleventh ordinary general meeting of the London & North Eastern Railway Company was held in the Wharnccliffe Rooms, Hotel Great Central, Marylebone, London, N.W.1, on Friday, March 2, Mr. William Whitelaw (Chairman of the company) presiding.

The Chairman: Ladies and gentlemen, I am very sorry that, owing to illness, our Deputy Chairman, Lord Faringdon, is not able to be with us to-day. I believe that this is the first time that Lord Faringdon has not been present at the meetings of his railway shareholders throughout the long period of forty years. In spite of his absence from business recently, he has continued to take his accustomed interest in the affairs of the company, and I have had the advantage of discussing our report and accounts with him. That he may be restored to a good measure of health again is, I am sure, the heartfelt wish of us all.

The Secretary (Mr. James McLaren) read the notice convening the meeting.

The Chairman: With the deepest regret we have to record the death during last year of Viscount Grey of Fallodon. No company was ever more faithfully served than by him and no board ever lost a more valued colleague. Until his general health somewhat suddenly broke down in the middle of the year, he had never missed a meeting of the board or of any committee which he was expected to attend. In addition to the work which he performed as Chairman of the Traffic Committee and Chairman of the North Eastern local board, for which we have good reason to be grateful, I desire to bear tribute to his constant and invaluable assistance in the task of welding seven companies into one. In filling up the vacancy in the board we looked to the younger business men in our North Eastern Area, and we are pleased to say that in Sir William Gray, Bart., we have found an admirable representative of the district. I am sure you will all join with us in cordially welcoming back to his work our Chief General Manager, Sir Ralph Wedgwood, after a long and serious illness, from which he has happily recovered.

Having as in previous years issued to all the stockholders a fairly complete review of the year's business, I propose to refer to only a few matters of interest to-day. The net capital expenditure for the year amounted to £727,148. Of this sum £457,716 were spent on works under the Development Act, 1929, and £97,112 on Passenger Duty works. In respect of the former we received in 1933 £80,013 in payment of annual grants; the aggregate amount so received up to December 31, 1933, is £146,514, the capital expenditure ranking for grant being approximately £1,850,000.

### 1d. a Mile Fares

At our last meeting I was able to indicate that the companies had nearly reached agreement upon the difficult problem of passenger fares. You are now all aware of what that decision was, namely, the experimental reduction of the third class return fare to one penny per mile. The success which has attended this policy has been at least sufficient to encourage us to continue it throughout the current year, and although we can hardly anticipate another wonderful summer such as that of last year, we have some confidence in the continued improvement of our passenger traffic.

### Pooling

The policy of pooling competitive traffic is making progress, though the difficulties met with in the working out of details prevent us from realising as quickly as we all desire the financial benefits inherent in it. In the meantime the gain to the public has been amply demonstrated, and we are looking forward to securing our share of that reduction of expenditure which the policy aims at.

With the passing into law of the Road and Rail Traffic Bill, to which reference was made a year ago, and the increase of taxation upon the heavier road motor vehicles, railway companies are now in a position to obtain their full share of the transport of goods upon less disadvantageous terms of competition. As in the case of road passenger traffic, we do not intend to make any effort to obtain a monopoly of road haulage, and there is good reason to anticipate that such a policy of co-operation with other road haulier companies and associations as will be mutually satisfactory and for the best interests of trade will be arrived at.

Rapid changes are being made in the conditions and methods of transport as in those of nearly all other industries in this country. Less handling of goods requiring transport over short distances and speedier delivery of traffic over long distances are calling for new methods, new organisations and new rolling stock, whether for rail or road.

### Fast Freight Trains

The mechanical horse with its trailer is replacing the horse and lorry in the larger towns and for short distances in country districts in respect of certain traffics. Door to door delivery becomes a more and more insistent demand with the consequent extension of our cartage areas. Conveyance of goods by rail is tending more and more to be by fast freight trains, of which the rolling stock must be equipped with continuous brakes throughout. Such trains require locomotives of quite a different type from those designed and built for the haulage of slow-moving loose-coupled goods trains, which until recently were almost wholly employed.

We have been for some years preparing for such a change, but the speed at which changes seem now to be called for is somewhat embarrassing. Sudden demands for new methods are apt to outrun the rate at which new types of locomotives and wagons can be supplied, but this extremely interesting phase in the development of freight transport is well in hand, and we shall not be found to have been unmindful of the constant need for keeping pace with the reasonable demands of trade for all sorts of transport whether it be for short or long distances, or for slow or rapid transit.

### Tourist Carriages

One of the striking movements of the last few years has been the growing demand for long distance excursion traffic. During last year we built five new trains specially designed for this tourist and excursion business. Each train consists of twelve vehicles and will carry 600 passengers. Several novel features are incorporated in their design. The seats are of a greatly improved semi-bucket type and have been designed to give each passenger not only a separate seat for himself or herself but one with the maximum of room and the greatest comfort. The seats are arranged in groups of four with a table between each pair. Every seat is numbered and can be reserved. There are two buffet cars on each train, by means of which refreshments and light meals can be served quickly; this arrangement appears to meet the demands of a great number of excursions and is more convenient and considerably cheaper than providing a fully-equipped kitchen and dining-car. The trains are distinguished from our other passenger carriages by being painted in our engine green up to the waist line and cream above. We have ordered two more trains of this type and expect them to be ready in the month of June.

### Steamship Services

Our steamship services have been as severely hit by the policy of tariffs and quotas as our inland traffic has in many directions gained from the same policy. We think that our

shipping business has probably seen its worst, and we are hopeful of some improvement during the current year. Our week-end cruises to Belgium and Holland by one of our latest vessels, the *Vienna*, were again a pronounced success and they will be continued in the coming season.

#### Land Cruises

Another kind of cruise was instituted last summer with the object of drawing public attention to the ease and comfort with which tourists may see a vast extent of our most beautiful country in a single week. The land cruise is made in a train consisting of vehicles suitable for day travel and of sleeping cars, with convenient arrangements for the care of such luggage as cannot be accommodated in the sleeping berths. The train ran at convenient hours and remained stationary for such times as to permit of sufficient sleep being obtained by those who are unaccustomed to travelling by night. It enabled passengers to visit Yorkshire, the Border country, the whole East Coast from Berwick to Aberdeen, crossing the Forth and Tay Bridges, the West Highlands and the English Lakes. Such excursions cannot be numerous, as the rolling stock required for them cannot be spared after the full summer train service has commenced. We intend to run four such excursions this year in the month of June.

#### Camping Coaches

Another novelty designed to keep our railway prominently before the public was the introduction last summer of the camping coach holiday. We provide old carriages fitted up with cooking and sleeping facilities; these are placed in sidings at suitable points and are let for a week at a time, one of the conditions being that the tenants must travel to them by rail. The demand exceeded the supply and an increased number are being supplied for the coming summer. In this way we are making use of carriages which have served their day as running vehicles and of sidings, which are not now fully occupied, at small country stations.

The state of trade in the country, which has been so disastrous in recent years, now seems to have definitely turned the corner, though it is only too easy to exaggerate the extent of the improvement.

#### Trade Improvement

The iron, steel and shipbuilding industries have made considerable improvement during the last six months, though a long road has to be travelled before reaching the prosperity of former years. The monthly output of steel has since August last been in excess of the monthly average output of 1913, and the number of new ships recently ordered gives some hope for better times in the shipyards.

The originating tonnage of iron and steel blooms, billets and ingots, &c., carried by the company has increased by 373,000 tons or about 57½ per cent. over that of 1932, and we have conveyed 366,000 more tons of iron and steel scrap, which is a fair index of better business in the heavy industries.

An increase of 269,000 tons of beet and other vegetable traffic indicates a gratifying improvement in home production, the tonnage of foreign vegetables imported by our steamers having decreased by over 40,000 tons, the larger part of which was in potato traffic.

#### Fish Traffic

With the approaching completion of the new dock at Grimsby we note with satisfaction that though last year was, generally speaking, not a good fishing year, the vessels arriving at the existing Grimsby docks increased by 799 as compared with the previous year, and that the revenue derived from the fishing trade at Grimsby was higher by nearly £18,000. At Hull the landings of fish increased by 6,297 tons, and our forwardings brought us an increased revenue of £74,896. From Yarmouth and Lowestoft we carried good increases of fish traffic both by passenger and goods trains, there being increases in round figures of 2,550 tons and £7,750.

#### Fruit Traffic

The fruit season was a short one, but it was good while it lasted. The Wisbech and Cambridge district is the one mainly concerned with our fruit traffic, and we carried from

it an increase of over 12,000 tons, earning nearly £23,000 more in money. An interesting feature of the operation of this traffic is that the goods trains carrying fruit to stations which enabled use to be made of our Whitmoor yard conveyed an increase of over 1,600 tons of fruit, largely because of our ability to accept fruit at a later hour and give it in other respects a better service consequent on the rapidity with which the necessary shunting and train formation were accomplished.

A certain number of subjects are referred to in a letter received from the Railway Stockholders' Union and a request is made that they should be referred to in the Chairman's speech. Several of them have been dealt with in the review, and do not call for further comment. The question of getting rid of canals is one which is constantly in view, but it is much more complicated than it appears; for instance, a number of works and factories draw their water supplies from some of our canals, and do so under old-standing agreements which have many years yet to run.

#### Hotels

While some of our hotels, largely dependent for their business on good trade, are not giving us a satisfactory return, others are doing very well. We have completed the modernisation of most of them and are actively carrying on the same work in others. We have had to rebuild our Hull hotel on account of the unsatisfactory foundation on which it was originally built and the faulty construction of some parts of it. This work is rendered more difficult by the necessity of keeping one part of the hotel open while another part is reconstructed, but we hope to complete the work in the autumn. I know that some people demand a reduction of hotel charges, but my experience is that they are generally the same people as demand all manner of comfort and up-to-date conveniences.

#### First Class Tickets

The question of reducing first class fares has been under consideration by the companies, but no decision has yet been arrived at. It is one of no little difficulty, about which it is more easy to differ than to agree.

The wages question is one bound up at present with the negotiations with the railway trades unions as regards the method of settling matters which may be in dispute from time to time. I am not able profitably to discuss this matter to-day.

No one can view with satisfaction accounts which in spite of much improvement still leave so large an amount of capital without remuneration, and our utmost efforts must continue to be concentrated upon the attraction of new business and the cutting out of every unnecessary expenditure.

The ratio of railway working expenditure has been 82.49 as compared with 83.63, joint lines have yielded increased net revenue of £60,000, interest and dividends from investments in other undertakings are £9,000 higher, and Treasury grants under the Development Act have been over £32,000 above those of last year, consequent on the progress made with the works in question. Our total net revenue has increased by £556,000 in round figures, and we are therefore able to raise the dividend on the first preference stock and the redeemable preference stock to double the rate paid last year. I presume you will hold the accounts as read, and I therefore now move that the report of the directors with relevant statement of accounts for the year ended December 31, 1933, be received and adopted.

Mr. Beckett: I have the honour to second the resolution.

#### Remarks of Shareholders

Mr. L. F. Clancy asked questions about payments alleged to have been made to former North Eastern Railway officers, which the Chairman ruled to be irrelevant as they did not concern the London & North Eastern Railway Company.

Mr. William Crozier proposed that the company issue free passes to each shareholder enabling him to attend the annual meeting from the station nearest his home, or, failing that, grant privilege tickets, as was done to employees and their families. Besides, privilege tickets were issued to persons attending conferences, &c., at especially reduced rates.

Mr. A. T. Barber-Fleming said that the British Railway



Stockholders' Union had during the past year been in constant communication with the company on a large number of points, some of criticism and others asking for enlightenment, and he would like to acknowledge the uniform courtesy and attention which these points had received from the company. The Stockholders' Union was now the official channel through which all points affecting stockholders could be put up to the companies. The annual review was again the most interesting feature of the accounts; not only was it packed with valuable information, but it showed that there was now a new spirit of service to the public animating railway management and railway salesmanship. There was, however, still a good deal of complaint among traders about the delay in quoting exceptional rates, with the result that very often traffic which should have gone to this company went to motor transit. He also raised a point as to deferred maintenance. It was stated in the review that during the coming year a great deal more would require to be spent on maintenance out of revenue. In regard to hotel charges he still thought there was a good deal of complaint which to some extent was justified. There was particularly a great demand for a bedroom and breakfast tariff. The stations had no doubt been kept in good repair, but many were out of date and required to be modernised. The main station at Glasgow was, he was afraid, in a very decayed condition.

Councillor Wilson thought it a wonderful achievement that this company had recovered lost passenger traffic to the extent of £121,981. The Chairman ought to be congratulated, considering that he was carrying the company through the most difficult time in the history of British railways. But, as a manufacturer, he had come to the meeting with a definite proof of why the shareholders were not receiving a dividend. He had in his hand a letter from the Road Transport Company in these terms: "Dear Sir, We will transport your goods 20 per cent. below railway rates." This was a shocking state of affairs. If the Government expected stockholders to maintain the railways in perfect condition and hand them over in time of war, lock, stock and barrel, then the Government had no option but to declare the road hauliers common carriers. Then they would come on the Rates Tribunal which was inaugurated when railways had a monopoly.

There was another way in which the railways had lost over £1,500,000 during the last year. The Post Office returns showed a profit of £11,055,717, of which £1,500,000 could be directly attributed to cash on delivery parcel traffic up to 11 lb. weight limit. He understood that the Post Office were considering the increase of that limit to 22 lb. If that were done it would be a serious matter for the railways, since carrying parcels was their business. Continuing, he said: At the present time we manufacturers have to send a 100 lb. machine cash on delivery by rail in this manner. We have to go to the post office, get a paper signed, and they send the machine on. The postman calls for the money; the customer says: "Where are the goods?" The postman says: "Somewhere on the railway," and the customer replies: "Then we will pay when we see them," and we lose the order. That is not cash-on-delivery; it is cash in advance. Mr. Chairman, I hope that you will give some consideration to the question of cash on delivery and that you will present, with Sir Josiah Stamp, a united front to the Government, telling them that they must declare our competitors common carriers.

#### Chairman's Reply

The Chairman: If that is all who want to speak, I will endeavour to reply to the questions that have been put. Mr. Crozier has raised a very old question, that of free passes to the meetings. That question was raised here at our first meeting in 1923; it was debated, and it was then decided that such passes could not be issued. As far as I remember, the chief reasons were that it would be entirely wrong that the shareholders living on our line should have facilities to the meeting which shareholders living on the London Midland & Scottish and the Great Western lines would not have. Secondly, as to the question about privilege tickets for the staff being a reason why they should be given, I explained before that privilege tickets for

the staff have been claimed as a condition of service by the staff, and they existed for many, many years before the amalgamation. A question of that kind, they say, can be settled only by agreement, or through some method of settling disputes, but we cannot interfere with the question except in that manner. Then there is the question of quoting exceptional rates. Mr. Fleming has dealt with that point and it is one of very great importance. We have given very close consideration to this question and are still doing so. As a matter of fact, 90 per cent. of the requests for special rates are answered by return. There is some delay in making answers to the rest, because other companies have got to be consulted. Where the traffic passes over two companies' lines, both companies must be in agreement before the exceptional rate is given; that is, of course, where the road haulier has an advantage over us, because he can go from any spot in the country to any other spot without consulting anybody else or any other company. We have, as a matter of fact, now established first rate direct communication by telephone—for instance, between Newcastle and our headquarters at York—for the very purpose of dealing with this important question. Mr. Fleming is not quite correct about the maintenance of way, wagons and rolling stock generally. We have not a programme laid down of so much money each year, and, if not spent, to go into reserve. That was departed from some years ago. We now maintain our stock as, according to the advice of our competent officers, it requires maintenance with this exception, as I told you last year, that we had a large number of wagons then for which there was no conceivable use. If we had repaired them, they would have had to go back to the sidings from where they were standing idle, and they would have required repair again before being able to go into use when they were required. We saw at the beginning of the second half of this year that they would be required and so they were repaired. They were only repaired once instead of twice, and they have all gone into traffic and are now earning revenue for us.

Now with regard to the hotel question and this question of what to charge. We have charges for bed and breakfast; some people will think they are too high, but we must really leave that to our responsible officers, who have to account to us for the success of our hotels. We discuss every month with them all these questions of various hotel charges.

I know Mr. Fleming's views about a certain part, at any rate, of Queen Street station in Glasgow. He may be glad to hear that we are pulling down some horrible ramshackle old shops there, and we are erecting some new shops in conjunction with a distinct improvement in part of the station, which he probably knows quite well, and that will be some improvement there; but the idea of embarking upon a large expenditure upon our big stations in the towns is a matter which I cannot contemplate. The long and the short of it is that what you want is sufficient accommodation for the traffic and not much more than that can be found to be really valuable from a dividend-earning point of view. Of course, it is not quite fair for Mr. Fleming to use the word "decayed"; that would convey to shareholders who do not know about it that the station was tumbling down. It is not decayed. I know the sense in which he used the word; there is no decay about it; it is an old station and requires frequent painting, and just before it is painted it does look dirty.

With regard to the road transport question, the quoting of rates, that is a matter which has been, of course, a very serious one for us, and we know road transport people have been quoting so much per cent. below the lowest railway rate. But I think the experience of this year will enable us to modify our views a good deal. We have a good deal more power now under the Road and Rail Traffic Act, and the road haulier will not have quite the freedom which he has had in the past.

With regard to cash on delivery, I think we carry that on ourselves, as a matter of fact. Probably we have not the same advantages as the Post Office, but, after all, we shall carry the Post Office parcels, even if they are cash on delivery, and I am not very much concerned about that so long as we see that we are doing our utmost to get our fair share. The point raised by Councillor Wilson as to the

company not performing c.o.d. itself would be much better thrashed out with the Chief General Manager, who would be glad to discuss the matter with Councillor Wilson. I will now put the resolution that the report of the directors with relative statement of accounts be received and adopted.

The resolution was put to the meeting and carried unanimously.

The Chairman: Item No. 3. I beg to move "That dividends be now declared in terms of Account No. 9 headed 'Proposed Appropriation of Net Revenue'; that the dividends be payable (under deduction of income tax), less (1) the amounts paid as interim dividends appearing in Account No. 9 (a) headed 'Statement of Interim Dividends Paid'; and (2) the balance paid on February 15 last of the dividends on the first and second guaranteed stocks—by warrants on March 8 to the proprietors registered in the books of the company at the close of business on January 24, 1934, and that warrants be sent by post on March 7."

Mr. Beckett: I beg to second the resolution.

The resolution was put to the meeting and carried unanimously.

Mr. Beckett: Ladies and gentlemen, I have to inform the meeting that in accordance with the provisions of the Railway Act, 1921, and the North Eastern, Eastern and East Scottish Group Amalgamation Scheme, 1922, the following Directors retire, and being eligible offer themselves for re-election: Mr. William Whitelaw; Sir Charles A. Batho, Bart.; The Hon. Eric B. Butler-Henderson; Mr. Walter B. Gair; Sir William Gray, Bart.; Mr. Ronald W. Matthews; Mr. Andrew K. McCosh.

I beg to move that the above be, and they are hereby, re-elected Directors of the company.

Mr. Bury: I have much pleasure in seconding that resolution.

Councillor Wilson: I would like to support the mover and second of the resolution.

Mr. Beckett: I put it to the meeting.

The resolution was put to the meeting and carried unanimously.

The Chairman: Thank you, ladies and gentlemen, for your kindness. I have to inform the meeting that, consequent on the resignation of Sir Charles E. Ellis, G.B.E., K.C.B., a vacancy exists on the Audit Committee and the directors recommend the appointment of Sir Berkeley Sheffield, Bart. I move "That Sir Berkeley Sheffield, Bart., be and he is hereby appointed a member of the Audit Committee in place of Sir Charles E. Ellis, G.B.E., K.C.B., resigned." I may remind the meeting, because some of you may not have been here before, that no salary is attached to the appointment.

Mr. Beckett: I beg to second the resolution.

A Shareholder: What do the Committee have to do?

The Chairman: The Committee have to satisfy themselves that the audit has been properly conducted and to decide whether or not to recommend the re-appointment of the auditor who retires. That is their work.

The resolution was put to the meeting and carried unanimously.

The Chairman: I have to inform the meeting that Sir Harry W. Peat, K.B.E., F.C.A., one of the auditors, retires, and being eligible offers himself for re-election.

Dr. Cowan: Mr. Chairman, ladies and gentlemen, I beg to move: "That Sir Harry W. Peat, K.B.E., F.C.A., be and he is hereby re-elected an auditor of the company."

Mr. G. J. Hyde: I beg to second the resolution. Sir Harry Peat is known to us and has served us well for many years. His name is well known in the actuarial world, and therefore I think we cannot do better than to re-elect him as an auditor of the company.

The Chairman: The motion is that Sir Harry W. Peat, K.B.E., F.C.A., be and he is hereby re-elected an auditor of the company.

The resolution was put to the meeting and carried unanimously.

The Chairman: Just before you go, I am going to ask you to decide for yourselves whether you desire the meeting in future to be at two o'clock in the afternoon or at half-past eleven in the morning, as it used to be? We will take a decision according to a show of hands. I want to ask those

in favour of continuing it at two o'clock please to hold up their hands.

The Chairman: Will those who are in favour of reverting to the old practice of holding the meeting at 11.30 a.m. please hold up their hands? I do not think we need count. Those in favour of holding the meeting at two o'clock are in the vast majority. That, ladies and gentlemen, concludes the business of the meeting.

Mr. Crozier: I beg to move a hearty vote of thanks to the Chairman.

The proposal was duly seconded and carried unanimously.

## The L.N.E.R. in 1933

After three-and-a-half years since the end of 1929, during which the trade of the country reached its lowest ebb, some general improvement began about the end of last July and developing during August became definite and constant for the remainder of the year. The interesting and important dates of last year so far as our railway traffic is concerned are May 1 and August 26 for passenger and freight traffic respectively.

### Summer Fares

On May 1 there was put into operation a third class fare of a penny a mile for a return journey, hedged about by no restrictions as to trains and available for a month. A proposal of this nature had been for some time under consideration, but its speculative character and the uncertainty of the results involved had made the companies chary of adopting it at an earlier date. The event proved that the element of uncertainty was far from negligible, successful as the policy has been on the whole.

For the 17 weeks ending on April 29 our passenger journeys (exclusive of season tickets) numbered 913,000 fewer than at the corresponding date of 1932, and the passenger receipts (exclusive of season tickets) were £77,000 lower. During the next two months when the penny a mile fare was in operation the passenger journeys increased by 664,000, but the receipts showed a further decrease of £23,000, a result which was by no means encouraging, especially as 147,000 more engine miles had been run mainly for the conveyance of the increased numbers. Thus after two months' experience the wisdom of having introduced this cheap fare was by no means apparent. Thereafter a definite improvement began to set in, doubtless assisted by a wonderfully fine summer. Between the date on which the penny a mile fare was introduced and the end of the year our passenger journeys increased by nearly five-and-three-quarter millions and our passenger receipts (exclusive of season tickets) by £144,000 at a cost of a little over a million engine miles. While to declare that the evidence available is conclusive as to the value of the penny a mile fare would be premature, it has at any rate been such as to have justified the companies in deciding to maintain this fare throughout the current year.

At July 1 our freight traffic showed a decrease of 2,393,000 tons and of £811,000 in receipts with a saving of over 1,200,000 engine miles. About the beginning of July some improvement in trade was perceptible and by August 26 an increase of 895,000 tons and £46,000 in receipts had been obtained with an increase of about 288,000 engine miles. Thereafter the increases became larger and more regular, and during the remainder of the year amounted to nearly three-and-a-half million tons and £775,000 in receipts, the average weekly increases being about 194,000 tons and £43,000. The extra engine mileage required to carry this increase of traffic from August 26 to the end of the year amounted to a little over a million-and-a-half miles. At July 1 the total decrease of freight traffic tonnage was 4.86 per cent. and the decrease in freight engine mileage was 3.14 per cent. From July 2 to August 26 the tonnage increased by 7.08 per cent. and the engine mileage by 2.60 per cent., and from the latter date to the end of the year the increase of tonnage was 10.27 per cent. and of the engine mileage 5.85 per cent. Our net ton-miles per engine hour, which for the year 1932 were 469.80, had risen at December 2, the date of the latest Ministry of Transport

Returns, to 501.52, the corresponding figure for all the railways of the country being 467.79.

### Receipts and Expenditure

During the first half of the year the total railway receipts decreased by £1,019,000 and the railway expenditure by £969,000; during the second half the railway receipts increased by £1,058,000 and the railway expenditure by £513,000, giving a total increase of £39,000 in receipts and a decrease of £456,000 in expenditure for the whole year, or a net improvement of £495,000. The increase of expenditure during the second half of the year was incurred almost wholly in respect of rolling stock, after it became clear that it was necessary to recondition a large number of our wagons which had for some years been standing idle, and to resume work on locomotives, which had been suspended until it was evident that the traffic to be handled would require them. The increased expenditure on rolling stock for the second half of the year amounted to £663,000.

In the Chairman's speech at the annual meeting last year the rolling stock question was dealt with at some length, and it was explained that with traffic as it was there was no necessity for any building of either locomotives or wagons on any extensive scale; at that time there were 430 locomotives ready for traffic but tallowed down and set aside, and 6,000 wagons which had been stored and would not be repaired until there was some prospect of their being required by a definite revival in the steel and iron trades. The position was closely watched, and this idle rolling stock was made ready for use as the need for it became apparent. All these wagons have now been repaired and returned to traffic, and of the 430 locomotives only 189 were still tallowed down at December 31. As the trade on our system increased and developed in the latter part of the year we made due provision for meeting it and renewed 875 of our older wagons before the close of the year. In the belief that the welcome improvement in trade which we have experienced during the last six months is likely to be continued and very probably increased and in view of the great development of our passenger traffic, considerable orders for the building of all classes of rolling stock have recently been placed. When traffic is light certain economies can be effected in permanent way and rolling stock maintenance, without, however, lowering standards of safety and efficiency. When traffic is restored and heavier demands are made for the movement of passengers and freight, heavier costs for maintenance are necessary, and during the current year the revenue will have to bear increased costs for the maintenance both of the permanent way and rolling stock.

Before leaving the matter of railway receipts and expenditure it may be well to make clear that gratifying as the recent improvement in the company's business has been there is still much ground to be covered before reaching even the moderately satisfactory position of the year 1929. The following table will indicate the position:—

	Total Railway Receipts.	Total Railway Expenditure.	Net Railway Receipts.
1929 .. ..	£ 55,561,000	£ 43,283,000	£ 12,278,000
1932 .. ..	£ 42,649,000	£ 35,668,000	£ 6,981,000
1933 .. ..	£ 42,687,000	£ 35,211,000	£ 7,476,000

### New Schemes and Works

On schemes designed to secure more economical operation which have been in full working order for twelve months and which have been reported upon during the year 1933 there were spent £861,638 against an estimated cost of £975,154; the actual saving secured by the operation of these schemes amounted to £145,037, or 16.8 per cent.

Among the works completed and brought into use during the year the most important are the widening of the line between Skelton Bridge (a few miles north of York) and Northallerton, and between Gidea Park and Shenfield on the Great Eastern section. As a result of the latter we have been able to make much needed and substantial improvements in the train services between London and Southend, Clacton-on-Sea, Ipswich, Norwich, Cromer, Yarmouth and Lowestoft.

Our investment in passenger road services at the end of the year amounted to £2,471,566. The return for the year upon this investment was at the rate of 6.87 per cent.; for the

year 1932 it was 6.72 per cent. The provision of these services has enabled us to make large savings of expenditure by the closing of branch lines either wholly or for passenger traffic and the withdrawal of services previously run by the company's own buses, which operated at a loss. These savings amounted to no less than £90,175 in the course of the year.

### Rail Motors

Up to the end of 1933 the directors had sanctioned a total estimated expenditure of £124,000 on the provision of over 300 engineers' rail motors, covering nearly 2,350 route or 4,000 single track miles. We anticipate a net annual saving of over £68,500, equal to 55 per cent. on the outlay. So far as schemes actually in operation are concerned, by the end of 1933 there were nearly 250 rail motors in use, covering some 1,720 route or 2,900 single track miles, and a net annual saving of £53,400 is in course of realisation, equal to a return of 60 per cent. on the outlay. Further schemes are in course of preparation involving 21 rail motors, covering 115 route or 190 single track miles, with an estimated net saving of about £3,600.

In Scotland, in addition to engineers' rail motors, the directors have sanctioned an expenditure of £7,750 in the provision of engineers' road motors, &c., for covering the maintenance of some 310 route or 520 track miles of line and estimated to yield a net saving of over £4,000 per annum or 51 per cent. on the outlay. Under these authorised road motor schemes there were in operation by the end of 1933 some 21 road motors covering 290 route or 490 single track miles and yielding a net saving of nearly £3,800 per annum, or a return of 53 per cent. on the outlay. Taking rail and road motor schemes together, we have at present about 41 per cent. of our total route miles, or 38 per cent. of our total equivalent single track miles authorised for maintenance by the rail or road motor systems. The corresponding percentage figures for the mileage already in operation by engineers' rail or road motors are 31 per cent. and 29 per cent. respectively. There is therefore still scope for further developing this form of permanent way maintenance. An interesting experiment in this connection is being made on our West Highland line, where in parts a road runs close to the line while at other parts there is no road access whatever. We have placed in this district a vehicle which can be run on either the road or the railway; the road will be used wherever possible in order to save the occupation of the single line, on which the passing places are often five miles apart, and in one case no less than fourteen miles.

### Road Motor Services

During last year we have largely increased our road motor services. At the close of 1933 the company had 2,267 parcels and goods road motor vehicles in use, compared with 1,615 at the end of 1932. Since the latter date the directors have authorised the purchase of 826 new vehicles, but these have not all been brought into operation. Of this number 113 are required to replace vehicles which have become obsolete and costly to maintain, and the remainder to provide for the further development of the company's cartage services. For some years past a policy has been followed of substituting motor units for horses, and during the past year schemes of this kind have been approved, involving the provision of 335 motors, which will ultimately have the effect of displacing 489 horses and in many cases dispensing with the services of cartage agents. As a result, the collection and delivery of traffic is being effected more speedily and economically, and wider areas are being served.

At certain important goods depots such as Ashburys, Manchester, and Farringdon Street, London, complete schemes of mechanisation have been carried out and others are being steadily introduced. Further arrangements have also been made for the provision of motor services in many country districts, where fast light vans have been provided for the conveyance of traffic to and from outlying points and its concentration at rail-head stations, transit times thereby being reduced and complete door-to-door delivery effected. The company's road motor fleet has been further augmented to meet present-day requirements by the purchase of additional live-stock vehicles and horse-boxes.

The railway companies acting together have taken a very



important step in the direction of co-ordinating rail and road traffic, by the purchase of the capital of Messrs. Carter Paterson & Co. Ltd. and of Hay's Wharf Cartage Co. Ltd., the latter being better known as Pickfords. The cost of the London & North Eastern Company's investment in these businesses amounts approximately to £545,000, and it is expected that a substantial return will be derived, partly in the form of the profits directly obtainable from the work performed by the cartage companies and partly as the result of the elimination of overlapping and wasteful competition. The identity and traditions of these two old-established businesses will be maintained, and those traders and others who have used their cartage facilities with advantage in the past will now have the benefit of the increased efficiency afforded by the combination of the services with those of the four railway companies.

### Road and Rail Traffic Act

Last year we issued along with the modified report and statement of accounts a special report with regard to the position of road competition for goods traffic. The matter has now been dealt with by Parliament, and the Road and Rail Traffic Act received the Royal Assent on November 17 of last year. Part I of the Act is the outcome of the Salter Report, of which report the two most important recommendations were that the contributions paid by goods vehicles towards road costs should be increased and that the transport of goods by road should be carried on only by licensed vehicles in the same way that the carriage of passengers by road is carried on to-day, namely, by licensed vehicles under the Road Traffic Act, 1930. Effect has been given to the first recommendation in the Salter Report by the increase in the scale of licence duties for goods vehicles imposed by the Finance Act, 1933. Effect is given to the second of those recommendations by provisions contained in Part I of the Act.

With respect to the transport of goods by road the Act provides that as from a day to be appointed (not yet fixed but probably July 1, 1934) no person shall under penalty of £20 for the first offence and £50 for each subsequent offence use on the roads a vehicle for the carriage of goods for hire or reward or for or in connection with any trade or business carried on by him otherwise than under a licence. The Act lays down statutory conditions which are to be deemed to attach to all licences. These are:—(1) that the vehicles are maintained in a fit and serviceable condition to secure which the vehicles are, by the Act, made liable to inspection and examination at any time by officers specially appointed for the purpose; (2) that any provision in force with respect to the limit of speed or of weight either laden or unladen and of loading are complied with; and (3) that the time during which persons employed on the vehicles may remain continuously on duty and the hours of rest which such persons are to have as laid down by any provisions for the time being in force are observed. The Act also makes applicable to all licences the condition that records be kept relating to:—(a) the hours during which persons employed in connection with the vehicles are in fact at work and at rest; (b) each journey performed by a vehicle when carrying goods; (c) the greatest weight of goods carried during any journey; (d) the description of the goods carried; and (e) the destination of the goods.

This condition is, however, to be the subject matter of regulations made by the Minister after consultation with the Transport Advisory Council set up under Part III of the Act and the Act confers upon the Licensing Authority a certain limited discretion to dispense in particular cases with all or any of these conditions. Further provisions, generally speaking, provide for a "fair wages clause" and for reference of disputes to the Industrial Council.

### Agreed Charges

The main provisions of Part II of the Act deal with the position as regards railway charges created by the decision of the Courts in the case known as "The Robinson Case." In that case the Great Western Railway Company had quoted to Messrs. Robinson a flat rate for all their merchandise from Avonmouth to a number of stations within a specified area

on the Great Western line of 7s. 2d. per ton, provided that Messrs. Robinson sent the whole of their traffic by rail. Other traders in the specified area took the point that the Great Western Railway Company were not entitled to quote such a rate and the Courts upheld the objection on the ground that a railway company were not entitled to quote rates not computed upon a basis both of tonnage and mileage. This disability is removed by the Act, subject to the control of the Railway Rates Tribunal. In considering an application for an agreed charge the Railway Rates Tribunal are to have regard to all relevant considerations and in particular to the effect which such charge may have either on the net revenue of the railway company concerned or upon the business of any objecting trader. The Act makes provision relieving the railway companies in respect of agreed charges approved by the Tribunal from the existing law relative to undue preference.

The principal provision of Part III of the Act is the constitution of the Transport Advisory Council, whose functions are to give advice and assistance to the Minister in connection with the facilities for transport and their co-ordination, improvement and development; a provision wide enough to bring under the purview of the council not only road and rail transport but also coastwise, canal and air transport. The members of the council are to be appointed by the Minister and comprise six members representing local authorities, eight members representing road users (five of these being in respect of motor vehicles, one in respect of horse drawn vehicles, one representing pedestrians and one representing pedal cyclists), three members representing railway interests, four members to represent canals, coastwise shipping and harbours, three members representing labour and five representing trade interests, making 29 in all, subject to the appointment of three additional members if the Minister thinks fit to do so.

While the railway companies have not secured all that they claimed in order to obtain complete equality of conditions for the transport of goods by rail and road, the Act is one of real value to them, and along with the increase of licence duties for goods vehicles will go far towards the abolition of the privileged conditions hitherto enjoyed by road hauliers and the establishment of fair conditions for the transport of goods by rail and road. For this result much of the credit is due to the joint action taken by the four railway companies working together and the assistance they received from the Railway Stockholders' Union and many individual stockholders, who pressed upon their representatives in Parliament the necessity for an alteration in the law governing road transport for goods.

Good progress is being made with the arrangement of pooling schemes between the companies and the policy is being developed satisfactorily. During the year the four railway companies have been considering the question of air services, and in this matter are acting in the closest co-operation between themselves.

### Iron and Steel Industry

A marked and gratifying feature of the past year has been the steady improvement in the iron and steel industry. The monthly average of production of pig iron in the United Kingdom in 1932 was 297,750 tons; in 1933 the monthly average was 343,800 tons, an increase of 15 per cent. On the North East Coast the increase was at the rate of 20 per cent. The national production of steel in 1932 averaged 438,500 tons per month; in 1933 this average had risen to 583,500 tons, an increase of 33 per cent. For the North East Coast the improvement was at the rate of 31½ per cent. These increases appear to be mainly attributable to the tariffs imposed under the Finance Act, 1932, and it must be borne in mind that the increased production is nearly all absorbed by the home market. Shipments of pig iron from the Tees showed an increase over 1932 of 34,300 tons, or 29 per cent., but of this tonnage 21,426 tons were shipped coastwise. The shipment of manufactured iron was about the same, but shipments of steel were 37,852 tons less.

The coal mining industry is benefiting from the current revival in iron and steel, and the prospects of a larger home demand are fairly good. Some increase of business has

accrued from the operation of trade agreements, notably with the Scandinavian countries, to which larger exports from the Durham and Scottish coalfields have to be recorded.

The year 1933 is accurately described as the worst year in the shipbuilding industry for nearly fifty years. Lloyd's Register of Shipping reports as follows:—"The output for 1933 is 54,679 tons lower even than that for the year 1932, and is the lowest recorded since the first issue, in 1888, of Lloyd's Register Shipbuilding Returns. The present total represents 27.2 per cent. of the world's output for 1933, as compared with 25.8 per cent. in 1932, 31.1 per cent. in 1931, 51.2 per cent. for 1930, 54.5 per cent. for 1929, 53.5 per cent. for both 1928 and 1927, and 58 per cent. in 1913." Towards the close of the year there was evidence of definite improvement, and while only 225,497 tons were under construction at the opening of the year (the lowest total of tonnage in hand ever recorded by Lloyd's) 331,541 tons were in hand in December, being an increase of 47 per cent. Further orders have recently been placed and the prospects of the industry are clearly better, especially on the Clyde. Nevertheless only about 20 per cent. of the available berths in the country are now, or soon to be, occupied; it is serious that the position of our mercantile marine has for some years past been undermined by subsidised competition from other countries. The matter is one of such great national urgency that the British shipping industry has recently represented to the Government the need for the adoption of measures to meet the position created in the industry by the shipbuilding and shipping policy of other nations.

#### Steamship Services

Our steamship services have continued to suffer from the effects of tariffs, quotas and generally disturbed trading conditions. There was a loss on steamships account for the year 1933 of £95,314, of which £81,588 was in respect of the Harwich and Grimsby Continental services. This loss is

about £20,000 more than in the previous year. Continental steamship passenger traffic shows an increase of 2 per cent. in numbers but receipts from passengers declined by 4½ per cent., which indicates that receipts from excursion traffic have not compensated for the loss in ordinary business traffic resulting from the abnormal political conditions in Central Europe. Week-end cruises were again run successfully from Harwich last summer. The tonnage of cargo carried declined by 18 per cent. In estimating the value of our steamship services it is necessary to take into account the railway receipts on traffic derived from these services. For the past year these are estimated at £379,835, of which the Harwich and Grimsby Continental services provided £273,415.

The company acquired from Great Eastern Train Ferries Limited in August last the three ferry steamers, the terminal at Harwich and certain other assets of Great Eastern Train Ferries Limited, which are essential for the continuance of the train ferry service between Harwich and Zebrügge, and an agreement has been arranged between the company and the Belgian National Railways by which the co-operation of the latter in the development of the service is secured.

The improvement in trade during the latter part of the year has enabled the net receipts from our docks, harbours and wharves to make a marked recovery. At June 30 these showed a decrease of £21,000 as compared with the first half of 1932, but an improvement of nearly £54,000 between June 30 and December 31 yielded an increase of net receipts of over £32,000 for the whole year.

The hotels department has earned a satisfactory increase in net receipts, mainly due to decreased expenditure; these are £21,331 higher than in 1932. Hotels, refreshment rooms and restaurant cars have all contributed to this result, and an especially satisfactory feature has been the marked success of our buffet cars. With the improvement in passenger traffic there is reason to hope for even better results during the current year.

### Railway Convalescent Homes Banquet

Mr. William Whitelaw, Chairman of the London & North Eastern Railway, presided on Monday at the spring banquet of the Railway Convalescent Homes, held in the Wharnccliffe Rooms, Hotel Great Central. The gathering was notable for the large attendance which included many railway officers. Among those present were:—

Messrs. R. Carpmuel, C. Carslake, H. S. Chapman, A. C. Cookson, O. H. Corble, Ashton Davies, G. Ellison, C. Gribble, Murray Griffith, Capt. J. W. Harris, Messrs. E. L. Hawkins, J. H. Knotts, J. F. Lean, Col. F. A. C. Leigh, Messrs. W. G. P. Maclure, J. A. Milligan, J. C. Mitchell, C. F. Newton, W. J. Sedcole, S. W. Smart, R. Thom, A. G. Walkden, W. V. Wood.

Before the interval Mr. Whitelaw made the presentation of a vellum of appreciation to Mr. Ernest Graham, late of the L.N.E.R., North Eastern Area, in token of his services to the Railway Convalescent Homes. Mr. Graham, who was unable to be present, recently retired from the General Committee of the institution after 12 years of service. In his absence the vellum was handed to his son.

Alderman F. B. Simpson, who was entrusted with the toast of "The Institution" said that not only was the organisation worthy but it was also flourishing and had a balance sheet as sound as its record of service. As an institution it was peculiarly and uniquely British, in that it was self governing and self managing. The President, who was also that year's

President of the Institute of Transport, used his public offices as platforms for expounding wise and sound views, not bounded by narrow limits. They were happy to have such a President, one, moreover, who was both approachable and accessible.

In response, Mr. Whitelaw spoke of the remarkable progress of the institution during the 10 years since first he was President. The patients received annually had increased by about 2,000 and the income by £4,000. Then only two of the railway companies had arrangements for collecting regular contributions through the pay sheets; now this was done by all the railways. All this winter he had been preaching the gospel of co-operation in transport. In the Railway Convalescent Homes was to be found an excellent example of what co-operation could achieve. In its organisation railway officers, though differing elsewhere in many matters with trade union leaders, were to be found agreeing and co-operating with them in that wonderful work of true charity. The work recalled to his mind a saying of the late Lord Cromer, "Men can do great good in this world if they do not care to seek the credit for it."

Mr. Whitelaw also made appreciative reference to the work of Mr. W. R. R. Culver, who retired from the secretaryship, by reason of ill health, at the end of last year after 36 years' con-

nection with the institution. His term of office had seen an increase of patients and annual income from 131 and £800 to 7,192 and £39,500. All would join in wishing him renewed health.

The toast of "Our Guests" was proposed by Mr. F. C. Holder and replied to by Captain A. Cunningham Reid, D.F.C., M.P., and Mr. John Marchbank. An engagement in Scotland compelled Mr. Whitelaw to leave early and he handed over the chair to Mr. F. W. Wheddon, Chairman of the Board of Trustees. An excellent musical and entertainment programme was interspersed throughout the evening, the happy arrangement of which was a tribute to the organising ability of the new Secretary, Mr. H. Haigh.

GERMAN AIR LINES.—Aeroplanes operated by Deutsche Luft Hansa over regular scheduled routes flew a total of 6,145,944 miles in 1933, against 5,122,400 miles in 1932, an increase of 15.5 per cent. Mileage flown in purely postal and express traffic showed an increase of 51 per cent. Eighty per cent. of the Luft Hansa express traffic is international. Service on main German internal and international lines was maintained throughout the winter for the first time. Now the Luft Hansa announces a considerable increase in its number of air lines, and the spring schedule, current from March 1 to April 30, includes 36 lines, instead of 23 as in 1933, and covers 46 airports instead of 38.

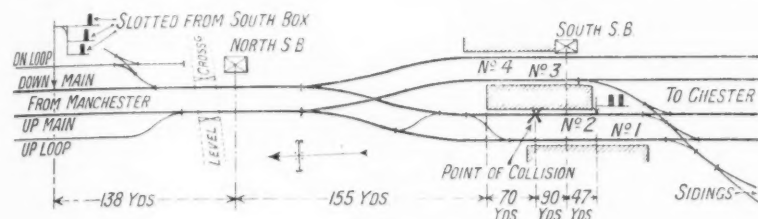
## Ministry of Transport Accident Report

Altrincham, M. S. J. & A. Joint:  
December 6, 1933

The sketch herewith has been prepared from a diagram that appears in Colonel Trench's report, with the distances, also given in the report, added. The accident in question was a collision between an arriving train and an empty carriage train standing in No. 2 platform road. The motorman of the arriving train was killed. The accident occurred at 9 a.m. in exceptionally dense fog, described by

possible. It is easy to realise that a signalman is reluctant to ask for such assistance in a place where it is not normally recognised as necessary, but he should not allow this to prejudice his judgment as to the necessity for such assistance under exceptional conditions.

It is clear from the evidence that motorman Keatley of the arriving train was approaching the station under clear signals with all proper caution. He had, of course, no reason to suspect



Sketch plan of scene of collision

some witnesses as allowing a visibility of only five to fifteen yards.

Both trains were engaged in the Manchester-Altrincham electric service. This service is confined to Nos. 1 and 2 platform roads, which are continued southwards, i.e., from Manchester, by sidings to the carriage sheds. The stationary train had arrived in No. 2 road at 9.5 a.m., and Signalman Ball in the South Box set the road and lowered the shunt signal for it to run into the sidings, where the trainmen would have changed ends and the train have then drawn forward to No. 1 platform, ready for its return to Manchester. The guard meanwhile had taken off the tail lamp and placed it on the platform near the end of the train; he also, as usual, turned out the lights in the carriages. The latter was an important feature, as it made the stationary train less visible from the signal box. Another point in the evidence was that the whistle of the standing train had given trouble to the driver, who thought it was frozen. The carriage examiner tested it, but could only get a faint noise, so he undertook to look at it in the sidings. Signalman Ball was working by sound, and thought the train had passed him, and that the faint whistle came from the sidings to indicate that the train was clear inside. He thereupon gave train-cut-of-section, accepted the second train, and the collision resulted.

Signalman Ball had no ground fog-mat to assist him. He stated that he had never had one and had not asked for one on this or any other occasion. Colonel Trench has no reason to suppose that if he had asked for one under such conditions there would have been any question as to a ground fog-mat being provided as quickly as

the presence of a train in the platform, and having regard to the density of the fog it may well be assumed that he could not see a tail lamp until too close to it to take effective action.

Guard Swindells was acting in accordance with regulations in switching out the train lights, and it would not be reasonable to blame him for the effect which this may possibly have had in rendering the train less visible to Signalman Ball.

Colonel Trench concludes his report as follows:—

(a) The intensive suburban service on this electrified line must involve severe pressure on the signalman in the South Box under fog conditions and every reasonable facility should be provided to assist him. The provision of track circuiting on Nos. 1 and 2 Bay lines, indicating in both North and South Boxes and locking the relevant

signals in rear, would obviously be of greatest assistance and is in my opinion necessary.

I was informed that this had been under consideration for some time between the two owning companies, and it is satisfactory to be able to state that it has now been definitely decided that such track circuiting shall be provided.

In these circumstances I have no recommendations to make.

(b) The question of the physical protection afforded to the motorman of an electric multiple-unit train in collision as compared with that of the driver of a steam locomotive naturally suggests itself in view of the circumstances of this accident, but I fear that this is not a matter on which any practicable suggestion can be made. It is evident that a motorman's cab, even of all-steel construction, as in this case, cannot provide the protection given by the boiler ahead of a steam driver, but it is equally evident that there are a number of countervailing advantages in favour of the electric train driver.

The construction of the stock concerned in this accident was strong and heavy and all vehicles were fitted with shock-absorbing buffers. It is impossible to define precisely the conditions which will arise in a collision having regard to movements of springs and varying loadings; in this case the leading end of the running train probably had its buffers a trifle higher than those of the stationary train at the moment of impact, with the result that it rode up and caused telescoping; it might equally have occurred that the buffers were dead level, in which case the collision might have resulted in a more violent shock to both trains without any telescoping.

I do not think it is practicable to suggest any strengthening of the ends of motor coaches which would materially diminish such risks, and I think that in this connection it is a sound principle to concentrate resources upon minimising the risk of collision, rather than trying to minimise its results.

INSTITUTE OF METALS.—The twenty-sixth annual general meeting of the Institute of Metals was held on March 7 and 8, when the retiring President, Sir Henry Fowler, K.B.E., LL.D., D.Sc. inducted his successor, Dr. H. Moore, C.B.E., into the chair. The report on the year referred to the institute's Silver Jubilee meeting at Birmingham and to the fund inaugurated in connection with the twenty-fifth anniversary of its foundation. A sum of £525 was contributed by the 122 original members, and additional sums totalling £144 2s. were received from others. The meeting on March 7 was followed by a dinner at the Trocadero Restaurant, Piccadilly Circus, the new President presiding. The programme for the coming year has now been announced. From April 8 to

14 the institute will carry out its first educational tour for students. The party will spend a week in Belgium, visiting several important metallurgical and engineering establishments, as well as Brussels and Bruges. The inclusive cost of the tour will be £6 10s. Students who are not already associated with the institute can participate in the tour if they apply for membership before March 12 to the Secretary, Mr. G. Shaw Scott, 36, Victoria Street, S.W.1. The annual May lecture will be given in London on May 9 by Prof. E. K. Rideal, F.R.S., on "Gases and Metal Surfaces." Arrangements are being made for the institute's autumn meeting to be held this year in Manchester—probably during the first week in September.



## RAILWAY AND OTHER REPORTS

### Liverpool Overhead Railway.

Gross revenue receipts for the year 1933 amounted to £64,716, of which £58,633 was derived from passenger traffic and £6,083 from miscellaneous sources. Working expenses were £64,826, leaving a loss on working of £110, as compared with a profit of £4,870 in 1932. After meeting interest on debenture stock (£6,755), and allowing for the debit balance of £1,350 brought forward, a debit balance of £8,215 is carried forward.

### Mersey Railway.

Receipts from the railway in the year 1933 amounted to £209,491, as against £211,911 in 1932, but expenditure was reduced from £129,219 to £126,117, leaving net receipts £82 higher, at £83,374. Miscellaneous receipts were, however, £430 lower, and miscellaneous charges increased by £73, leaving net revenue £179 higher, at £82,889. The appropriation to general reserve (£1,000) and the dividends are the same as for 1932, and the amount carried forward is increased from £4,203 to £4,502.

### Forth Bridge Railway.

For the year 1933 the balance credited to the London & North Eastern Railway Company, which works the Forth Bridge Railway, was £2,754, as compared with £2,318 for 1932 and £2,585 for 1931. Traffic receipts from the L.N.E.R. Company were £178,000, compared with £175,500 for 1932 and £176,000 for 1931, and the net receipts, after deducting expenditure on maintenance of works, general charges, rates, railway freight rebates, &c., amounted to £132,752 in 1933, as compared with £132,395 in 1932 and £132,494 in 1931. Total net revenue amounted to £124,687, against £124,251 in 1932 and £124,518 in 1931. After providing for debenture stock interest (£28,933) and for a dividend of 4 per cent. (£93,000) on the ordinary stock, there remains a balance of £2,754 as above stated.

### London Midland & Scottish Railway (Northern Counties Committee).

For the year 1933 gross receipts from the railway amounted to £302,168, against £402,144 in 1932. Railway expenditure was reduced from £439,647 to £391,453, and the loss on working was increased from £37,503 to £89,285. From road transport, however, there was a net profit of £2,145, against a loss of £8,365 in 1932, the improvement being due both to increased receipts and reduced expenditure. The strike, which diminished railway receipts, also affected the hotels department, a loss of £1,269 being sustained, as against a profit of £2,831 in 1932. In the final result there was a debit balance for the year of £82,451. In passenger train receipts (£165,896) there was a decrease of £39,376, and the goods train receipts of £132,838 showed a fall of £59,867. Capital

expenditure in 1933 included £4,068 on a petrol rail motor, £4,528 on hotel improvements at Portrush and £45,046 on the Greenisland loop. Estimated expenditure in 1934 includes £4,175 on petrol rail motors.

### Derwent Valley Light Railway.

Total tonnage carried in 1933 amounted to 55,461 tons, as compared with 57,479 tons in 1932, the difference being mainly accounted for by a decrease of 2,349 tons in coal traffic, owing to some extent to the hot summer and road competition. Merchandise traffic increased by 1,187 tons. Net revenue for the year amounted to £1,810, against £2,123 for 1932, and after adding the balance brought forward and deducting fixed charges, the sum of £1,604 is available. In view of the overdraft at the bank, and the present condition of agriculture, the directors recommend that this amount be carried forward.

### Londonderry & Lough Swilly Railway.

Rail services in the early months of 1933 were seriously interfered with by the strike, and this, with the trade depression, caused the heavy reduction of £11,880 in railway gross receipts for the year 1933, which amounted to £19,320. Railway expenditure was reduced from £35,121 to £26,865, and there was a loss on railway working of £7,546. Road transport, however, showed a profit of £3,655, against £3,448 in 1932. With the help of miscellaneous receipts and a grant-in-aid of £4,500 from the Government of Northern Ireland, there was a net income of £1,188. The debit balance of £67,725 brought forward from the previous year and the prior charge requirements have been accounted for by an adjustment (£74,016) in respect of provisions for income tax and statutory charges raised in connection with extension lines, no longer required. A sum of £4,500 has been granted by the Free State Government towards the loss on working the Letterkenny, Carnadonagh, and Burtonport Extensions.

### Belfast & County Down Railway.

The report for the year 1933 shows that railway gross receipts amounted to £157,348, railway expenditure to £150,698, and railway net receipts to £6,650. These figures compare with £164,050, £158,432, and £5,618 respectively for 1932. On the omnibus services there was a profit of £277 in 1933 against a loss of £357 in 1932, net receipts of hotels and refreshment rooms increased from £1,888 to £3,133, and of road motor freight services from £75 to £175. Miscellaneous receipts were down £1,523, mainly due to general interest and to the fact that 1932 had the benefit of £1,056 profit on sale of Government securities. Total net income amounted to £16,029, as compared with £14,540 in 1932. The directors' announcement as to divi-

dends was given in our issue of February 16. Passenger train receipts were £129,152, a decrease of £1,610, and goods train receipts £156,390, a decrease of £6,620. An interesting figure in the capital expenditure of the year is that of £4,047 for a diesel locomotive.

### Metropolitan Railway Surplus Lands Co. Ltd.

The first report of this company since its incorporation in June last covers the period from June 29 to December 31, and shows net revenue amounting to £50,196. The sum of £49,423 is brought forward from the accounts of the Metropolitan Railway Surplus Lands Committee, out of which a dividend for the half-year to June 30 absorbed £36,313, so that £63,307 is now available. Out of this a dividend is being paid for the half-year of 2½ per cent. (against 2½ per cent. paid by the committee for the latter half of 1932). A transfer of £1,500 is made to reserve, and £471 is written off preliminary expenses, leaving £1,915 to go forward.

**Charles Roberts & Co. Ltd.**—The directors have declared a dividend on the preference shares at the rate of 6½ per cent. per annum, free of income-tax up to 4s. in the £, for the half-year ended December 31, 1933, payable on March 1, 1934. The last payment on these shares was made on March 1, 1931, when the dividend for the half-year to December 31, 1930, was met.

### Birmingham Railway Carriage & Wagon Co. Ltd.

A fall in net profit from £55,961 for 1932 to £17,504 for 1933 is reported. Both figures include an unspecified amount for profit on sale of investments. The dividend on the ordinary shares is maintained at 5 per cent., but this involves a reduction in the balance forward from £54,802 to £30,645.

### Manchester Ship Canal Company.

Gross receipts of the whole undertaking in 1933 amounted to £1,687,443, against £1,641,386 in 1932. Of the 1933 receipts, £1,208,248 came from the Manchester Ship Canal (£1,176,843), £175,640 (£170,850) from Bridgewater Canals, and £303,555 (£293,693) from the railways. Total expenditure amounted to £983,204, against £1,000,855 in 1932, and net receipts improved from £640,531 to £694,239. Total tonnage of sea-borne and barge traffic improved from 5,318,935 tons to 5,389,069 tons. The company's Act of 1933 received the Royal Assent in July last.

**GRAND NATIONAL TRAFFIC.**—Some thirty-thousand racegoers, conveyed in approximately sixty special trains, will converge upon the Liverpool area from all parts of the country on Friday, March 23, the date of the Grand National. At least twenty excursions, some of them scheduled to make the run of nearly two hundred miles to the racecourse station at Aintree non-stop, will be despatched from London alone. Several of the race specials will be composed entirely of first class stock.

## NOTES AND NEWS

**Canadian Pacific Earnings.**—For the month of January, 1934, the gross earnings of the Canadian Pacific Railway were £1,794,000, an increase of £258,800 on January, 1933. The working expenses of £1,616,200 showed an advance of £145,600, so that in the net earnings of £177,800 there was an improvement of £113,200.

**Canadian National Earnings.**—Gross earnings of the Canadian National Railways for the month of January, 1934, amounted to \$11,562,577, an increase of \$1,838,988 in comparison with January, 1933. In the working expenses of \$12,371,543 there was a reduction of \$740,530, so that the loss on working was brought down from \$1,907,424 to \$808,966.

**L.N.E.R. and Lowestoft Fish Docks.**—The House of Lords has dismissed the appeal of the London & North Eastern Railway Company on the question of its right to exclude from its docks at Lowestoft motor-lorries used to convey fish long distances by road. Mr. Justice Branson, in the King's Bench Division, had given a decision in the company's favour, but this had been reversed by the Court of Appeal.

**Easter Travel in Germany.**—The German State Railway has arranged to issue Easter return tickets at a reduction of 33½ per cent., valid from midnight, March 28, to midnight, April 4. These may be combined with the special excursion tickets issued on March 28, 29, 30, via Ostend and via Flushing. Travellers wishing to extend their stay in Germany beyond April 4 may make use of the 25 per cent. reduction granted for visitors from abroad.

**Railways as Textile Users.**—Mr. W. Pritchard, the chief of the L.M.S. textile research laboratory at Derby, gave a lecture, on February 14, entitled "Textiles Purchased by British Railways and Their Application." The lecture was sponsored by the Textile Institute and the local branch of the Society of Dyers and Colourists. The lecturer stated that the L.M.S. purchased over £750,000 worth of textiles every year, the various articles totalling over 1,000. The L.M.S. uses every known kind of textile fibre from Ramie for the gas-mantles to cow-hair pads for the rail chairs.

**Agreed Charges.**—As will be seen from the legal notice published on page 427, a third set of applications has been lodged with the Railway Rates Tribunal for its approval of agreed charges under the provisions of Section 37 of the Road and Rail Traffic Act, 1933. Particulars of these agreed charges and applications may be inspected at the office of the Tribunal, 2, Clement's Inn, W.C.2. Notices of objection must be filed at the office of the Registrar, at the above address,

on or before March 27. The Tribunal reserved judgment on Tuesday, March 6, in the first series of applications—37 in number—which had been submitted to it. The Court was occupied five days in hearing these applications.

**Railway Accident near Moscow.**—As a result of a collision between two Siberian trains 5 miles from Moscow, 19 persons are reported to have been killed.

**U.S. Railways' Net Improvement in January.**—The first 56 United States railroads to issue their January reports showed an increase in net earnings as compared with the same month of 1933 of as much as 190 per cent. Compared with January, 1932, the gain is as high as 207 per cent.

**Metropolitan Railway Final Dividend.**—A final dividend of 0·4344 per cent. (about 8s. 8½d.), less tax, will be paid on Metropolitan Railway consolidated stock for the half-year to June 30 last. This distribution, which represents the final liquidation of the Metropolitan Railway, now merged in the L.P.T.B., had to be deferred until the company's auditors and those appointed by the Minister of Transport had certified the amount of undistributed earnings within the meaning of the Act.

**Retired Railway Officers' Society.**—Mr. F. A. Clear (the President of the Society) presided at a largely attended luncheon of the Retired Railway Officers' Society, held yesterday at the Abercorn Rooms. The toast of "The Guests" was responded to by Mr. Gerald Loder, Chairman of the Southern Railway Company. Sir Harold Hartley, Vice-President, London Midland & Scottish Railway, proposed the toast of "Success to the Retired Railway Officers' Society" which was responded to by Sir Charles Morgan, formerly Chief Engineer, L.B.S.C.R., and now a Director of the Southern Railway. The "Health of the President" was proposed by Mr. H. Marriott, and seconded by Mr. H. G. Drury. A report of the function will appear next week.

**Increasing Safety of Rail Travel.**—The following statement regarding U.S.A. railways was issued recently by Mr. L. A. Downs, President of the Illinois Central System: "For many years railway travel has been one of the safest ways to travel, and it has been growing safer all the time. Only one passenger lost his life in a train accident on all the railroads of the country in 1932, and 480,000,000 passengers were carried. In 1931 only four passengers lost their lives in such accidents; in 1930, only seven. Many railroads have operated for years without having a single train accident fatal to a passenger. Railway work has become safer too. In 1913 one railway employee was

killed to every 500 in service. In 1932 the ratio was one fatality to every 1,950 employees. In other words, railway employment in 1932, as measured by fatal accidents, was only about one-fourth as hazardous as it was in 1913. The railroads make safety records in the transportation of freight as well as of passengers. In 1932 they carried more than 200,000,000 lb. of dangerous explosives, millions of gallons of gasoline, enormous quantities of acids, compressed gases, and corrosive, poisonous and inflammable liquids, and only two persons lost their lives in accidents resulting from the handling of all this business. They were trespassers."

**Age of American and German Locomotives.**—The accompanying diagram, taken from *Zeitschrift des Vereines Deutscher Ingenieure*, shows that the average age of locomotives in service

AMERICAN MAIN LINES	YEARS IN SERVICE	GERMAN STATE RAILWAY
3·6%	UNDER 5 YEARS	3·9%
13·1%	5-10 YEARS	9·9%
13·4%	10-15 YEARS	39·1%
15·5%	15-20 YEARS	27·4%
54·4%	OVER 20 YEARS	19·7%

Comparison between years of service of locomotives of American main line railways and the German State Railway, as at December, 1932

on the main lines of the United States of America is definitely greater than that of the German State Railway locomotives. The total number of the American locomotives at the end of the year 1932 was 53,316, compared with 21,002 on the German State Railway, but, whereas less than 20 per cent. of the German locomotives had been in service for more than 20 years, over 54 per cent. of the American locomotives were in this age-group. Taking the average age of the "over 20-year" machines to be 25 years, the mean age of all the American locomotives was about 19·1 years, compared with 14·7 years for the German locomotives. The advantage of the German railways in this respect is due to more than 17,000 machines being taken out of service during the period 1913-32, and to the

replacement of the war losses of over 8,600 locomotives.

#### S.R. Electrification Extensions.

It is expected that the electrification between Bickley and St. Mary Cray will be completed by May.

**Closing of Leek and Manifold Section, L.M.S.R.**—The 2 ft. 6 in. gauge Leek and Manifold Light Railway, L.M.S.R., from Waterhouses to Hulme End, will be closed to traffic of all sorts on and from Monday, March 12.

**New Locomotives for German State Railway.**—In order to obviate dismissals of men, the German State Railway has decided to order 53 more steam engines of a total value of 8,500,000 marks (about £425,000 at par).

**Railway Telephone Services.**—More than 5,000 railway stations and offices in Great Britain are provided with Post Office telephones, placing them in immediate contact with the business world and the public generally. Important developments are now taking place in the railways' private telephone services. To relieve congestion on the wires, the carrier wave telephony system is being introduced, enabling as many as four conversations to be carried on simultaneously over any circuit.

#### "Facts about British Railways."

—The fifth issue of the booklet bearing this title, which contains many interesting facts about the railways of Great Britain, can now be obtained free on application to the British Railways Press Bureau, 35, Parliament Street, S.W.1. The book appears this year in a new guise and contains the 1933 figures for the four group companies. Additional information on various aspects of railway working and development is given, presenting the British railways as a live and progressive industry, with a high standard of efficiency and capable of catering in every way for the needs of the trading and travelling public.

**Continuous Cab-Signalling Trials in France.**—Three automatic block sections (beginning at Bayeux) on the down line between Caen and Cherbourg, which is now being equipped throughout with automatic signalling, have been fitted with apparatus for continuous electric cab-signalling. One Pacific locomotive of the French State Railways is at present equipped with the repeating gear, though it will eventually be standardised on all engines working over the line and the system extended to cover the whole section. The cab repeater shows the indications of three-colour light signals at the entrance to each block section at the moment of passing them. A hooter is simultaneously sounded when a more restrictive indication than that already showing appears. M. Flandin, the Minister for Public Works, made a trip over the automatic section last Sunday on the footplate of the Pacific locomotive already fitted with the cab-repeater, accompanied by M. Dautry, General Manager of the

State Railways. It is understood that similar trials are to be made on the Nord between Creil and Longneau.

**Sequel to South African Dynamite Train Explosion.**—One of the largest explosions which ever took place on a train was recorded on page 187 in THE RAILWAY GAZETTE of August 12, 1932. A Reuters message from Pretoria now reports the result of an action for damages brought on behalf of the consignees against the railway before the Supreme Court. The claimants were awarded £6,000 and costs, as against £15,000 claimed by them.

**Carter Paterson & Co.**—Carter Paterson & Co. is petitioning the Court on March 19 for sanction to a proposed alteration in the form of constitution by substituting a memorandum and articles for the company's deed of settlement and all regulations now in force. By the proposed memorandum the company's objects will be extended to enable it to carry on the businesses of haulage contractors, general agents, builders of motor vehicle bodies, agents for the sale of and repairers of motor vehicles.

**Southern Train Ferries.**—Three sister ships are being built at the same time on the Tyne for the Southern Railway's new ferry service between Dover and Dunkerque. The vessels will be 360 ft. long by 63 ft. wide, but will only draw 12 ft. 6 in. when loaded. They will be capable of carrying 40 trucks or 12 sleeping cars, and are licensed to carry 500 passengers. The first of these ships, which is to be called *Twickenham Ferry* after the famous Thames ferry, will be launched on March 15 by Lady Dent, at the Neptune works of Swan, Hunter & Wigham Richardson Limited, Walker-on-Tyne.

#### Linking up Moorgate Stations.

The London Passenger Transport Board has arranged to carry out an important improvement scheme at its Moorgate stations. The Great Northern and City Line booking hall is to be closed, and a subway run under Moorgate into the booking hall of the City Line station. Two new escalators are to be constructed, and the platforms of the two stations brought into touch with each other. A subway from the Metropolitan Line platforms to the City Line booking hall will also be provided; it will enable passengers to avoid the present crossing of the street when changing from one line to the other. The work is to be begun at once.

**Colour in Sleeping Car Decoration.**—In renovating sleeping cars on the L.N.E.R., Mr. H. N. Gresley, the Chief Mechanical Engineer, has decided, as an innovation, to use distinctive colours for the different pairs of compartments. The scheme of decoration and the appointments of the cars are described in an editorial note on p. 385. The cellulose paint was sprayed on to the walls and ceilings by compressed-air guns. Special attention is paid to riding comfort by the reduction

of noise and vibration. Asbestos felt packing between the inside lining and outside panelling damps out extraneous sounds. The beds have Vi-spring mattresses and the passengers' comfort is further assured by the special compound bogies, whose side-bearing springs are laminated with auxiliary india-rubber springs which absorb small high-frequency vibrations. The vibration periods of the coil bolster springs are designed mutually to cancel one another.

**L.N.E.R. Musical Society's Jubilee Dance.**—The L.N.E.R. Musical Society held the final dance of the season at the G.E. Hotel, Liverpool Street Station, on Friday, March 2, when an excellent programme of music was rendered by the society's dance orchestra. The function was a milestone in the history of the society, in that it was the 50th dance held over a period of 15 years. An unique feature is that during the whole of this time Mr. Percy Syder and Mr. David King have officiated as M.C.'s, with Mr. Arthur Vale as Hon. Secretary. Amongst those present were Mr. G. F. Thurston, Divisional General Manager, and Miss Thurston, Mr. and Mrs. Percy Syder, and Mr. Gerald Syder, and Mr. and Mrs. John Miller, of York. Mr. A. W. Headley, the Musical Society's Hon. Secretary, was unavoidably absent.

#### Civil Engineers' Dinner

The annual dinner of the Institution of Civil Engineers took place at the Savoy Hotel, London, on March 7, under the presidency of Sir Henry P. Maybury. Among those present were:—

The Swiss Minister, the High Commissioners for Canada and the Irish Free State, the Agents-General for South Australia, Quebec, Victoria, and Ontario, Lt.-Col. E. P. Anderson, Lord Balfour of Burleigh, Messrs. C. R. Byron, R. Carpmad, Sir Walter B. Clode, Mr. Arthur R. Cooper, Prof. J. D. Cornuack, Col. R. E. B. Crompton, Messrs. C. Day, G. Ellison, H. J. Fereday, R. Freeman, Sir Alexander Gibb, Mr. W. W. Grierson, Sir Robert A. Hadfield, Mr. W. T. Haderow, Sir Harold Hartley, Sir Clement D. M. Hindley, Mr. P. V. Hunter, Sir Cyril W. Hurcomb, Sir Henry Jackson, Sir Herbert A. Lawrence, Mr. F. Lydall, Sir Lynden L. Macassey, Sir Murdoch MacDonald, Messrs. A. H. McMurdo, A. Matheson, A. Melville, E. J. Missenden, Sir Charles L. Morgan, Lt.-Col. A. H. L. Mount, Sir David J. Owen, Lord Plender, Mr. Frank Pick, Lord Queensborough, Sir Hugh Reid, Messrs. N. P. P. Sandberg, O. F. A. Sandberg, F. E. Wentworth-Sheldis, Sir John E. Thornycroft, Col. A. H. C. Trench, Mr. C. B. Unwin, Sir Herbert A. Walker, and Mr. W. B. Worthington.

Lord Macmillan, proposing the toast "His Majesty's Ministers," credited the Government with having brought about the recovery which this country was now experiencing and hoped that His Majesty's Ministers would be as excellent engineers in the work of reconstruction that lay before them as they had been able physicians in the work of convalescence. Coupling the toast with the name of the Minister of Transport, who was present, Lord Macmillan quoted the proverb that evil communications corrupt good manners.



and hoped that both Mr. Stanley and Sir Henry Maybury, the President of the Institution, would see to it that the communications of this country were good.

Mr. Oliver Stanley expressed on behalf of the Government thanks for the tribute paid by Lord Macmillan and expressed pleasure at being the guest of Sir Henry Maybury, who had done so much towards the improvement of the roads of this country. He had made roads which were fit for heroes, if perhaps for heroes only.

Lord Stonehaven proposed the toast of "The Institution of Civil Engineers," which, he said, was a national institution and had produced the engineers who had done more than any other group of people to develop the British Empire by "directing the great sources of power in nature for the use and convenience of man." Engineers had, indeed, developed the machine faster than we had been able to use it and the world was faced with the problem of greater production than

consumption. He looked to the Institution of Civil Engineers for guidance as to the means to be adopted to enable the great resources now available to be fully used.

The President, in response, referred to the recent developments of engineering and the benefits they were bestowing upon the population. He mentioned particularly the Grid by which electricity was made available in every hamlet in the country.

Sir Richard Redmayne, proposing "Our Guests," referred to the prevailing tendency to control everything and quoted the Milk Marketing Board as typical. He suggested that there might be a speech marketing board for the control of post-prandial speeches.

Monsieur Charles R. Paravicini, the Minister for Switzerland, responding, paid a tribute to civil engineers, who, he said, worked internationally towards universal order and progress without a thought of quarrelling, but with their objective steadily before them. Sir Dennis Herbert also responded.

## British and Irish Railway Traffic Returns

GREAT BRITAIN	Totals for 9th Week			Totals to Date		
	1934	1933	Inc. or Dec.	1934	1933	Inc. or Dec.
L.M.S.R. (6,941 mls.)						
Passenger-train traffic ...	377,000	379,000	- 2,000	3,249,000	3,176,000	+ 73,000
Merchandise, &c. ...	454,000	408,000	+ 46,000	3,937,000	3,437,000	+ 500,000
Coal and coke ...	276,000	269,000	+ 7,000	2,463,000	2,421,000	+ 42,000
Goods-train traffic ...	730,000	677,000	+ 53,000	6,400,000	5,858,000	+ 542,000
Total receipts ...	1,107,000	1,056,000	+ 51,000	9,649,000	9,034,000	+ 615,000
L.N.E.R. (6,339 mls.)						
Passenger-train traffic ...	242,000	245,000	- 3,000	2,129,000	2,116,000	+ 13,000
Merchandise, &c. ...	329,000	276,000	+ 53,000	2,847,000	2,375,000	+ 472,000
Coal and coke ...	243,000	223,000	+ 20,000	2,263,000	2,108,000	+ 155,000
Goods-train traffic ...	572,000	499,000	+ 73,000	5,110,000	4,483,000	+ 627,000
Total receipts ...	814,000	744,000	+ 70,000	7,239,000	6,599,000	+ 640,000
G.W.R. (3,750 mls.)						
Passenger-train traffic ...	157,000	159,000	- 2,000	1,359,000	1,362,000	- 3,000
Merchandise, &c. ...	183,000	157,000	+ 26,000	1,565,000	1,364,000	+ 201,000
Coal and coke ...	113,000	114,000	- 1,000	1,014,000	987,000	+ 27,000
Goods-train traffic ...	296,000	271,000	+ 25,000	2,579,000	2,351,000	+ 228,000
Total receipts ...	453,000	430,000	+ 23,000	3,938,000	3,713,000	+ 225,000
S.R. (2,177 mls.)						
Passenger-train traffic ...	230,000	223,000	+ 7,000	2,062,000	2,011,000	+ 51,000
Merchandise, &c. ...	65,500	57,000	+ 8,500	532,000	485,000	+ 47,000
Coal and coke ...	39,500	36,000	+ 3,500	338,000	326,000	+ 12,000
Goods-train traffic ...	105,000	93,000	+ 12,000	870,000	811,000	+ 59,000
Total receipts ...	335,000	316,000	+ 19,000	2,932,000	2,822,000	+ 110,000
Liverpool Overhead (64 mls.)	962	1,027	- 65	9,804	9,255	+ 549
Mersey (44 mls.)	4,069	3,954	+ 115	37,989	35,578	+ 2,411
*London Passenger Transport Board	505,700	—	—	17,388,700	—	—
IRELAND						
Belfast & C.D. (80 mls.) pass.	1,545	1,465	+ 80	15,783	15,453	+ 330
" " goods	596	509	+ 87	4,752	4,471	+ 281
" " total	2,141	1,974	+ 167	20,535	19,924	+ 611
Great Northern (562 mls.) pass.	7,250	1,150	+ 6,100	63,750	38,800	+ 24,950
" " goods	10,350	450	+ 9,900	71,900	39,250	+ 32,650
" " total	17,600	1,600	+ 16,000	135,650	78,050	+ 57,600
Great Southern (2,158 mls.) pass.	19,977	20,291	- 314	161,706	158,351	+ 3,355
" " goods	33,325	29,765	+ 3,560	280,189	256,570	+ 23,619
" " total	53,302	50,056	+ 3,246	441,895	414,921	+ 26,974

\* 35th Week

## British and Irish Railway Stocks and Shares

Stocks	Highest 1933	Lowest 1933	Prices	
			Mar. 7 1934	Rise/ Fall
G.W.R.				
Cons. Ord. ....	551 <sub>2</sub>	31	641 <sub>2</sub> *	+11 <sub>2</sub>
5% Con. Prefce. ....	109 <sub>3</sub> <sup>4</sup>	69 <sub>2</sub>	1151 <sub>2</sub> *	+11 <sub>2</sub>
5% Red. Pref. (1950) ..	109 <sub>4</sub>	87 <sub>2</sub>	1131 <sub>2</sub> *	—
4% Deb. ....	108 <sub>15</sub> <sup>16</sup>	99 <sub>4</sub>	108	+1
4 <sub>1</sub> <sup>1</sup> / <sub>2</sub> Deb. ....	108	100 <sub>3</sub> <sup>4</sup>	1101 <sub>2</sub>	—
4 <sub>1</sub> <sup>1</sup> / <sub>2</sub> Deb. ....	116	106	1171 <sub>2</sub>	—
5% Deb. ....	128	117 <sub>4</sub>	1281 <sub>2</sub>	—
2 <sub>1</sub> <sup>1</sup> / <sub>2</sub> Deb. ....	65	60	661 <sub>2</sub>	+2
5% Rt. Charge ....	124	111 <sub>2</sub>	1271 <sub>2</sub>	+1
5% Cons. Guar. ....	122	103	1251 <sub>2</sub> *	—
L.M.S.R.				
Ord. ....	297 <sub>8</sub>	121 <sub>8</sub>	281 <sub>2</sub>	+1 <sub>2</sub>
4% Prefce. (1923) ....	51	17	60	+2
4% Prefce. ....	72	33 <sub>4</sub>	81*	—
5% Red. Prf. (1955) ....	93	47 <sub>4</sub>	102*	+2
4% Deb. ....	103 <sub>4</sub>	89 <sub>2</sub>	105	+1
5% Red. Deb. (1952) ..	114	105	113 <sub>2</sub>	—
4% Guar. ....	97 <sub>4</sub>	68 <sub>8</sub>	101*	—
L.N.E.R.				
5% Pref. Ord. ....	221 <sub>2</sub>	73 <sub>4</sub>	221 <sub>2</sub>	+3 <sub>4</sub>
Def. Ord. ....	103 <sub>4</sub>	41 <sub>8</sub>	11	+5 <sub>8</sub>
4% First Prefce. ....	651 <sub>2</sub>	193 <sub>8</sub>	73*	+11 <sub>2</sub>
4% Second Prefce. ....	401 <sub>2</sub>	121 <sub>4</sub>	441 <sub>2</sub>	+4
5% Red. Pref. (1955) ..	83 <sub>4</sub>	27	93*	+21 <sub>2</sub>
4% First Guar. ....	94 <sub>3</sub> <sup>4</sup>	58 <sub>4</sub>	97 <sub>2</sub>	+1
4% Second Guar. ....	89 <sub>4</sub>	48	95	+2
3% Deb. ....	77	60 <sub>4</sub>	80 <sub>2</sub>	+2
4% Deb. ....	02 <sub>3</sub> <sup>4</sup>	80	104 <sub>2</sub>	+11 <sub>2</sub>
5% Red. Deb. (1947) ..	112	102 <sub>2</sub>	111 <sub>2</sub>	—
4 <sub>1</sub> <sup>1</sup> / <sub>2</sub> Sinking Fund Red. Deb.	107 <sub>2</sub>	98 <sub>4</sub>	106 <sub>2</sub>	—
SOUTHERN				
Pref. Ord. ....	71	27 <sub>4</sub>	85*	—
Def. Ord. ....	243 <sub>8</sub>	93	301 <sub>2</sub>	+41 <sub>2</sub>
5% Prefce. ....	107 <sub>16</sub>	74	1151 <sub>2</sub> *	+11 <sub>2</sub>
5% Red. Pref. (1964) ..	107 <sub>3</sub> <sup>4</sup>	78 <sub>8</sub>	113*	-1 <sub>2</sub>
5% Guar. Prefce. ....	124 <sub>4</sub>	102 <sub>3</sub> <sup>4</sup>	1251 <sub>2</sub> *	—
5% Red. Guar. Pref. (1957) ..	115 <sub>8</sub>	103 <sub>2</sub>	1151 <sub>2</sub> *	—
4% Deb. ....	1071 <sub>2</sub>	96 <sub>3</sub> <sup>4</sup>	107	—
5% Deb. ....	1261 <sub>2</sub>	114 <sub>4</sub>	1271 <sub>2</sub>	—
4% Red. Deb. ....	1071 <sub>4</sub>	100	1061 <sub>2</sub>	—
1962-67				
BELFAST & C.D.				
Ord. ....	6	4	5	-1
FORTH BRIDGE				
4% Deb. ....	991 <sub>2</sub>	951 <sub>2</sub>	1001 <sub>2</sub>	—
4% Guar. ....	981 <sub>2</sub>	94	1001 <sub>2</sub>	—
G. NORTHERN (IRELAND)				
Ord. ....	71 <sub>2</sub>	31 <sub>2</sub>	5	—
G. SOUTHERN (IRELAND)				
Ord. ....	28	16	24 <sub>3</sub> <sup>4</sup>	—
Prefce. ....	24	121 <sub>8</sub>	20	—
Guar. ....	42	165 <sub>4</sub>	441 <sub>4</sub>	+1 <sub>4</sub>
Deb. ....	60	30 <sub>7</sub> <sup>8</sup>	62	—
L.P.T.B.				
4 <sub>1</sub> <sup>1</sup> / <sub>2</sub> "A" ....	117 <sub>7</sub> <sup>8</sup>	112	1181 <sub>2</sub>	+11 <sub>2</sub>
5% "A" ....	127 <sub>4</sub>	119 <sub>4</sub>	127	+1 <sub>2</sub>
4 <sub>1</sub> <sup>1</sup> / <sub>2</sub> "T.F.A." ....	111 <sub>4</sub>	106	1091 <sub>2</sub>	—
5% "B" ....	1221 <sub>2</sub>	114	1211 <sub>2</sub>	+1
5% "C" ....	86 <sub>3</sub> <sup>4</sup>	741 <sub>2</sub>	771 <sub>2</sub>	-51 <sub>2</sub>
MERSEY				
Ord. ....	161 <sub>4</sub>	5	13*	—
4% Perp. Deb. ....	83	63 <sub>7</sub> <sup>8</sup>	851 <sub>2</sub>	—
3% Perp. Deb. ....	62	51	651 <sub>2</sub>	+1
3% Perp. Prefce. ....	50 <sub>8</sub>	27	501 <sub>2</sub> *	—

\* ex-dividend

## CONTRACTS AND TENDERS

The Metropolitan-Cammell Carriage, Wagon & Finance Co. Ltd. has received an order from the L.M.S.R. Northern Counties Committee, Ireland, for eight ballast wagons of the 20-ton four-wheeled type.

The Gloucester Railway Carriage & Wagon Co. Ltd. has secured an order from the Sudan Government Railways for two bogie carriage underframes for 60-ft. sleeping cars, complete with vacuum brake gear, compensated buffing and drawgear, and two large capacity tanks.

D. Wickham & Co. Ltd. has secured an order for a further gang trolley and 14 four-wheeled trailers for gang trolleys for permanent-way men from the Central Uruguay Railway.

The Egyptian State Railways Administration has recently placed orders as follows:—

Metropolitan-Vickers Electrical Co. Ltd.: Lamps.  
Imperial Chemical Industries Limited: Sulphuric acid.  
Kolok Manufacturing Company: Stationery.  
Remington Typewriter Co. Ltd.: Stationery.  
Ellams Dupliator: Stationery.  
Felten & Guillaume (through W. F. Dennis & Company): Galvanised iron wire.  
Dr. Cassirer & Company: Wire.  
Deutsche Kabelwerke: Wire.  
W. T. Henley's Telegraph Works Co. Ltd.: Wire.  
The Whitcross Co. Ltd.: Wire.  
British Insulated Cables Limited: Wire.  
W. F. Dennis & Co.: Wire.  
N.V. Nederlandsche Kabelfabriek: Wire.  
Socony-Vacuum Corporation: Rolling stock oils and benzene.  
The Shell Co. of Egypt Limited: Rolling stock oils.

The North British Rubber Co. Ltd. has secured an order from the Bengal Nagpur Railway for 17,400 hose pipes.

Jessop & Co. Ltd. has secured an order from the Bengal-Nagpur Railway for 28,718 files, manufactured by the Nicholson File Company.

A. T. Gooyee & Co. Ltd. has secured an order from the Bengal-Nagpur Railway for 6,650 paint and varnish brushes of Hamilton's make.

Heatly & Gresham Limited has received an order from the Indian Stores Department, New Delhi, for train lighting batteries consisting of eleven sets of 38 cells each.

The SKF Ball Bearing Co. Ltd. and Roberts McLean & Co. Ltd. have secured orders for ball and roller bearings from the Indian Stores Department, New Delhi.

The Exors. of Jas. Mills Limited has received orders from the Agent, East Indian Railway, for a total of 117,000 Mills patent rail anchors for 75 to 115-lb. rails.

G. D. Peters (India) Limited has secured orders from the Indian Stores Department, New Delhi, for four single operator welding generators, two Lister C.E. twin-cylinder stationary diesel engines and tachometers.

The International General Electric Company has received orders from the Stores Purchase Committee, Government of Mysore, Bangalore, for an oil circuit breaker, stud and cable terminals,

current transformers, wrought copper cable terminals, and Watt hour meters.

Nasmyth Wilson & Co. Ltd. has secured an order for five superheater boilers for M class metre gauge mixed traffic 4-6-0 type locomotives for the Mysore State Railways.

Harland & Wolff Limited has received an order for two tugs, to be constructed at the firm's Clyde yard, for the South African Government Railways and Harbours Administration. The tugs are to be 145 ft. in length, 32 ft. in width, and 16 ft. deep, with twin-screw engines developing 2,500 i.h.p. They will be used at Port Elizabeth, where a new and extensive harbour was opened last year.

The South African Government Railways and Harbours Administration has placed orders for a total of 7,500 tons of steel rails, divided among the following firms:—Barrow Hamatite Steel Co. Ltd., 1,500 tons; Cargo Fleet Iron Co. Ltd., — tons; Dorman Long & Co. Ltd., 2,500 tons; Skinningrove Iron Co. Ltd., — tons; and United Steel Companies Limited (Workington Iron & Steel Branch), 1,500 tons. Orders have also been placed for materials as follow:—Anderston Foundry Co. Ltd.: Bolts, nuts and washers; Bayliss, Jones & Bayliss Limited: Coachscrews, fishbolts and nuts; Charles Richards & Sons Limited: Coachscrews; Rivet, Bolt & Nut Co. Ltd.: Bolts, nuts and washers; Société Commerciale de Belgique: Steel sleepers; S. A. D'Angleur Athus: Steel sleepers; Usines et Acierces Allard: Cast steel buttresses; Vereinigte Stahl: Check and forged steel rail chairs.

The directors of the Great Western Railway Company have authorised the placing of the following contracts:—

Supply of fifty-four 2-wheel 2-ton trailers, and five 6-ton boats: The Eagle Engineering Co. Ltd.  
Supply of one 6-ton lorry crane: Kansomes & Rapier Limited.  
Supply and erection of two sets of sleeper conveyors and elevators at Hayes creosoting yard: The North Acton Conveyor and Elevator Co. Ltd.  
Reconstruction and lengthening of two bridges, one under the Radr branch at Cowbridge Road, and the other near Ely station: E. C. Jordan & Son.  
Reconstruction, lengthening, and widening of Cannon Road bridge, over the Didcot and Chester line near Wolverhampton: Bolton & Lakin Limited.  
Supply and erection of a timber-framed warehouse at Shepton Mallet: F. Pratten & Co. Ltd.  
Supply of steelwork: The Horsehay Co. Ltd., Horsehay, Salop.  
Provision of two electrically-driven ram pumps at Over Junction, Gloucester: The Uskside Engineering Co. Ltd.  
Supply of a slot drilling machine at Swindon works: William Asquith Limited.  
Provision and laying of an electric cable to Manor House Hotel: The Borough of Torquay Electricity Undertaking, Torquay.  
Provision of a squash racket court at Tregenna Castle Hotel: The Gradidge Construction Co. Ltd., London.

The Birmingham Railway Carriage & Wagon Co. Ltd. has secured an order from the Entre Rios Railway for a 30-seater petrol-mechanical railbus with rubber tyres and Noble patent guide wheels, as described in THE RAILWAY GAZETTE of December 15, 1933, on

pp. 889 and 890. The car is to run on the standard 4 ft. 8½ in. gauge. It will have light luxury-type seating, and the maximum loaded weight is to be 8 tons.

Tenders are invited by the Mysore Government Stores Purchase Committee, through Messrs. Rendel, Palmer & Tritton, 55, Broadway, Westminster, S.W.1, for locomotive, carriage and wagon spare parts required for the Mysore Railways during the year 1933-1934. Tenders are returnable by April 2.

Tenders are invited by the Argentine State Railways, receivable in Buenos Aires by April 4, for the supply of 20 permanent-way gang platform trolleys and 16 pump trolleys for service on metre gauge track. Firms desirous of offering trolleys of United Kingdom manufacture can obtain further details from the Department of Overseas Trade.

## Forthcoming Events

Mar. 10 (Sat.).—Permanent Way Institution (Manchester-Liverpool), at Victoria Station, Manchester, 3 p.m. Discussion: "Day to Day Work of a Ganger."

Mar. 12 (Mon.).—Engineers' German Circle, at Inst. of Mechanical Engineers, Storey's Gate, London, S.W.1, 6 p.m. "Modern Crane Construction and its Applications in Industry and Commerce: The Development of New Types, their Speeds and Capacities, and the Importance of Particular Types of Crane in the Different Branches of Industry and Commerce," by Herr Oberingenieur Fried Heym.

Institute of Transport (London). Joint Meeting with Inst. of Railway Signal Engineers, at Institution of Electrical Engineers, Savoy Place, W.C.2, 5.30 p.m. "Railway Colour Light Signalling from an Operating Point of View," by Mr. C. M. Jenkin Jones.

Permanent Way Institution (London), in Staff Dining Room, Waterloo Station (S.K.), 7 p.m. Film: "The Trip of the Royal Scot in Canada and the U.S.A."

Mar. 13 (Tues.).—Institute of Fuel, at Inst. of Mechanical Engineers, Storey's Gate, London, S.W.1, 6 p.m. "Coal Handling at Ports," by Mr. D. E. Cameron.

L.N.E.R. (Middlesbrough) Lecture and Debating Society, at Cleveland Scientific and Technical Inst., Corporation Road, 7.15 p.m., Annual General Meeting and Reading of Prize Essay.

Permanent Way Institution (Leeds), at Leeds and County Liberal Club, Quebec House. "Permanent Way and the Future," by Mr. J. B. Dawson.

Mar. 14 (Wed.).—Institution of Civil Engineers, Great George Street, London, S.W.1, 6 p.m. "Mechanical Characteristics and Classification of Sands and Gravels," by Mr. H. J. Deane.

Institution of Railway Signal Engineers, at Inst. of Electrical Engineers, W.C.2, 6 p.m. "Some Notes on Centralised Traffic Control," by Mr. L. H. Peter.

Institution of Welding Engineers (London), at Inst. of Mechanical Engineers, Storey's Gate, S.W.1, 7.45 p.m. "The Collation of Research and Application for Welded Fabrications," by Mr. H. W. Hawkins.

Mar. 15 (Thurs.).—Institute of Metals (London), at Society of Motor Manufacturers and Traders, Ltd., 83, Pall Mall, S.W.1, 7.30 p.m. "Spectroscopic and Microchemical Analysis of Metals and Alloys," by Mr. G. Barr and Miss Hadfield.

United Kingdom Railway Officers' and Servants' Association, at the Trocadero Restaurant, Piccadilly Circus, London, W.1, 73rd Anniversary Festival.

## LEGAL AND OFFICIAL NOTICES

## Sudan Government

**SUDAN RAILWAYS** require an ASSISTANT DISTRICT TRAFFIC MANAGER, under 25 years of age, unmarried, of Public School and University education, with some experience in Traffic Working on an English or Overseas railway.

Applications will not be considered until 15th May, 1934. The successful candidate will be required to leave for the Sudan about three months later.

Initial salary £E.480 per annum (£E.1=£1 1s. 6d.). Salaries of Sudan Government officials are at present subject to a 7½ per cent. abatement. Probationary contract for two years; free first-class passage; strict medical examination.

Applications, giving full particulars of age, education, railway experience and copies of testimonials, should be sent to THE CONTROLLER, Sudan Government London Office, Wellington House, Buckingham Gate, S.W.1, marking envelope "District Traffic Manager."

## IN THE COURT of the Railway Rates Tribunal

## Road and Rail Traffic Act, 1933.

## Agreed Charges.

**NOTICE IS HEREBY GIVEN** that applications for the approval of Agreed Charges under the provisions of Section 37 of the Road and Rail Traffic Act, 1933, short particulars of which are set out in the Schedule hereto, have been lodged with the Railway Rates Tribunal.

Particulars of the said Agreed Charges, and the said Applications, may be inspected at the Office of the Tribunal, 2, Clement's Inn, Strand, London, W.C.2, at any time during office hours and at the places specified in the sixth column of the said Schedule. A copy of each Application lodged with the Tribunal can be obtained from Mr. G. Cole Deacon, Secretary, Rates and Charges Committee, 35, Parliament Street, Westminster, London, S.W.1, price 1s., post free.

Notices of objection by any parties entitled to object to the approval of any of the said Agreed Charges must state concisely the grounds of objection and must be filed at the

office of the Registrar, 2, Clement's Inn, Strand, London, W.C.2, on or before the 27th day of March, 1934, and a copy thereof on or before the same day served on or sent by registered post to Mr. G. Cole Deacon, at the above address. A separate Notice must be filed and served in respect of each Application.

Each notice filed must be on foolscap size paper and must be stamped with an adhesive fee stamp for 2s. 6d. (which can be purchased at the office of the Tribunal only). If sent by post for filing each Notice must be accompanied by a Postal Order for 2s. 6d. payable to the Registrar, when a stamp will be affixed at the office. A Notice by a Representative Body of Traders must contain a statement of the facts upon which such Body claims to represent a substantial number of traders interested in, or likely to be affected by the decision on, the application.

Four additional copies of each Notice must be lodged with the original at the office of the Registrar.

5th March, 1934.

T. J. D. ATKINSON, Registrar

## South Indian Railway Company Limited

**THE Directors** are prepared to receive Tenders for the supply of:—

**DOGSPIKES, SCREW SPIKES, &c.**

Specifications and Forms of Tender will be available at the Company's Offices, 91, Petty France, Westminster, S.W.1.

Tenders, addressed to the Chairman and Directors of the South Indian Railway Co. Ltd., marked "Tender for Dogspikes, &c.," with the name of the firm tendering, must be left with the undersigned not later than 12 noon on Friday, the 23rd March, 1934.

The Directors do not bind themselves to accept the lowest or any Tender.

A charge, which will not be returned, will be made of 5s. for each copy of the Specification.

Copies of the drawings may be obtained at the Offices of the Company's Consulting Engineers, Messrs. Robert White & Partners, 5, Victoria Street, Westminster, S.W.1.

A. MUIRHEAD,

Managing Director.

91, Petty France,  
Westminster, S.W.1.

8th March, 1934.

## Universal Directory of Railway Officials and Railway Year Book

39th Annual Edition, 1933-34.

Price 20 - net.

This unique publication gives the names of all the principal railway officers throughout the world, together with essential particulars of the systems with which they are connected. Much general and statistical information about railways is also concisely presented.

**THE DIRECTORY PUBLISHING CO. LTD.,**  
33, Tothill Street, London, S.W.1.

## OFFICIAL ADVERTISEMENTS.

**OFFICIAL ADVERTISEMENTS** intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Thursday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

## Forthcoming Meetings

Mar. 9 (Fri.).—**Great Southern Railways Company** (Ordinary General), Gresham Hotel, 20-22, Upper O'Connell Street, Dublin, C.8, at 2 p.m.

Mar. 27 (Tues.).—**Ottoman Railway from Smyrna to Aidin** (Half-Yearly), Winchester House, Old Broad Street, E.C.2, at 11 a.m.

Number of Application	Date of Lodgment	Railway Company	Person or Firm	Nature of Agreed Charge	Where Available for Inspection
1934, No. 51	Mar. 1, 1934	G.W., L. & N.E., L.M. & S., SOUTHERN and L.P.T.B. (MET. SEC.)	C. & T. HARRIS (CALNE) LTD., Calne, Wilts, Registered Bacon Curers. This application, by leave granted under Rule 4, relates also to Agreed Charges with the other Registered Bacon Curers in Great Britain as specified therein	Per pig. Live pigs consigned to Registered Bacon Curers or their Agents	Aberdeen Guild Street Goods Station, Inverness Goods Station, Glasgow, Bellgrove Station, Edinburgh, Gorgie Goods Station, York, Foss Islands Goods Station, Exeter, St. David's Goods Station, Calne Goods Station, Norwich, Trowse Goods Station, Leicester, Queen Street Goods Station, Birmingham, Curzon Street Goods Station, Brettell Lane Goods Station, L.M.S. Goods Office, Victoria Station, Manchester and Railway Clearing House, London.
.. .. 52	..	G.W. and L.M. & S.	THE DISTRIBUTORS AND TRANSPORTERS, LTD. (MESSRS. UNILEVER'S DISTRIBUTING ORGANISATION), Unilever House, London Applicable also to traffic consigned by:— CHRISTOPHER THOMAS & SONS LTD., Bristol T. H. HARRIS & SON LTD., London, E. R. S. HUDSON LTD., Bank Hall, Liverpool LEVER BROS. LTD., Port Sunlight JOSEPH WATSON & SON LTD., Leeds BRITISH SOAP CO. LTD., Hull BENJAMIN BROOKE & CO. LTD., Port Sunlight J. CROSFIELD & SONS LTD., Warrington J. L. THOMAS & CO. LTD., Exeter	Per ton Candles, soap and soap with articles for advertisement	St. Philips Goods Station, Bristol, Temple Meads Goods Station, Bristol, and Railway Clearing House, London.
.. .. 53	..	G.W. and L.M. & S.	PALETHORPES LTD., Tipton	Per ton Sausages, tongues, brawn, boned hams, pressed meat, meat pies, and black puddings	Tipton Passenger Station and Railway Clearing House, London.
.. .. 54	..	G.W., L. & N.E., L.M. & S. and SOUTHERN	J. E. YORK LTD., 1, Harwood Street, Chalk Farm Road, London, S.W.1	Per package Clothing, drapery and general stores wares	Railway Clearing House, London.
.. .. 55	..	L. & N.E.	THOMAS HEDLEY & CO. LTD., Phoenix Buildings, Collingwood Street, Newcastle-on-Tyne	Per ton Candles, soap and soap with articles for advertisement	Newcastle, Forth Goods Station and Railway Clearing House, London.
.. .. 56	..	L.M. & S.	JOHN WALLACE & CO. LTD., Rowallan Creamery, Kilmarnock	Per package Butter	Kilmarnock Goods Station and Railway Clearing House, London.



## Railway Share Market

There have been some wide fluctuations in the stock and share markets during the current week. Home railway stocks, after several years of comparative inactivity, returned to a prominent position in markets. As was anticipated long ago, the recurrence of active buying by the public has found Stock Exchange dealers with a shortage of stock with the result that prices have been moving up in recent weeks by points in a day instead of in fractions as would be the case where good market conditions exist. A slight indication of profit-taking on the part of holders was made the justification this week for lowering prices heavily on Tuesday.

Southern preferred ordinary stock which had touched the high record price of 88½ fell four points to 84½ within an hour or two. Such "wide" fluctuations arising from a few offerings of stock are a

reflection on the technique of the home railway market. A market which lowers prices by four points on the offer of a little stock cannot be regarded as a satisfactory "free" market. This condition is in sharp contrast to the market which existed in home railway securities not farther back than one generation of members. The idea of lowering any home railway stock by four points in one day would never have entered into Stock Exchange calculations in the past and any dealer who ventured upon such a course would have been overwhelmed with bids. This new mechanical conduct which now exists in the home railway market of the Stock Exchange is a factor of importance in valuing stocks. Southern preferred ordinary is expected to earn the full 5 per cent. for the current year and on this basis it is considered to be worth nearer par than its present price although it is clearly unsuitable for the short-term operator who desires to buy and sell within one fortnightly account.

The movements in the market were generally downward following the large rises of Monday, but the amount of stock which came on the market was very small and movements in price were entirely out of proportion to the volume of sales. With the reaction in home railway stocks some attention was given to Argentine stocks but the scope here for arguments in favour of an early appreciation in prices is not so strong.

Buenos Ayres Great Southern and Buenos Ayres Western ordinary stocks were advanced. The Argentine railways are not likely to earn anything on their ordinary stocks in the current financial year. The B.A. Great Southern is not expected to earn more than 3½ per cent. on its 6 per cent. preference stock and the B.A. Western not more than 2½ per cent. on its 4½ per cent. preference stock. After an early rise Canadian Pacific shares reacted although most prior lien stocks of Colonial and Indian railways were higher.

### Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1933-34	Week Ending	Traffic for Week		No. of Week	Aggregate Traffic to Date			Shares or Stock	Prices					
			Total this year	Inc. or Dec. compared with 1933		Totals		Increase or Decrease		Highest 1933	Lowest 1933	Mar. 7, 1934	Yield % (See Note)		
						This Year	Last Year								
South & Central America															
Antofagasta (Chili) & Bolivia	830	4.3.34	16,900	+	£ 7,020	9	£ 111,900	79,830	+	£ 32,070	Ord. Stk.	26	115½	25	Nil
Argentine North Eastern	753	3.3.34	10,530	+	2,330	35	354,600	384,100	+	29,500		141½	5	9½	Nil
Argentine Transandine	111										A. Deb.	55	40	50	9
Bolivar	170	Feb., 1934	6,400	—	1,200	8	12,950	15,200	—	2,250	6 p.c. Db.	10	5	10	Nil
Brazil											Bonds.	15	11	13	3½
Buenos Ayres & Pacific	2,806	3.3.34	140,000	+	18,000	35	3,577,000	3,709,000	—	132,000	Ord. Stk.	26	97½	15	Nil
Buenos Ayres Central	190	25.2.34	8,102	—	1,056	35	343,442	321,980	+	21,462	Mt. Db.	30	10	25½	Nil
Buenos Ayres Gt. Southern	5,083	3.3.34	257,000	+	16,000	35	6,395,000	6,910,000	+	25,000	Ord. Stk.	44½	21½	32	Nil
Buenos Ayres Western	1,926	3.3.34	78,000	+	3,000	35	2,225,000	2,335,000	—	110,000	"	34½	15	24½	Nil
Central Argentine	3,700	3.3.34	166,000	+	5,000	35	5,747,000	6,455,000	—	708,000	"	28½	15	21	Nil
Do.											Dd.	18	10	14½	Nil
Cent. Uruguay of M. Video	273	24.2.34	18,303	+	3,823	34	555,522	520,097	+	35,425	Ord. Stk.	20	8	15	Nil
Do. Eastern Extn.	311	24.2.34	3,999	+	341	34	109,484	110,931	—	1,447	"				
Do. Northern Extn.	185	24.2.34	2,158	+	124	34	59,712	65,007	—	5,295	"				
Do. Western Extn.	211	24.2.34	2,167	+	771	34	55,202	47,726	—	7,476	"				
Cordoba Central	1,218	3.3.34	32,090	+	3,000	35	1,463,000	1,464,000	—	1,000	Ord. Inc.	91½	21½	5½	Nil
Costa Rica	188	Nov., 1933	18,534	—	3,195	21	99,724	107,788	—	8,064	Stk.	29	20	30	Nil
Dorada	70	Jan., 1934	11,700	+	3,900	4	11,700	7,800	+	3,900	1 Mt. Db.	76½	68½	80	7½
Entre Rios	810	3.3.34	15,100	+	2,300	35	556,600	546,300	+	10,300	Ord. Stk.	26½	9	19	Nil
Great Western of Brazil	1,082	3.3.34	9,700	—	600	9	97,400	143,600	—	46,200	Ord. Sh.	23½	12	5½	Nil
International of Cl. Amer.	794	Jan. 1934	\$460,733	+	\$30,823	4	\$460,733	\$429,910	+	\$30,823	"				
Interoceanic of Mexico											1st Pref.	12	1½	12	Nil
La Guaira & Caracas	224	Feb., 1934	3,180	—	2,950	4	7,580	13,240	—	5,660	Stk.	16	10	10	Nil
Leopoldina	1,918	3.3.34	27,816	+	3,563	9	201,048	226,406	—	23,358	Ord. Stk.	20½	10	12½	Nil
Mexican	483	28.2.34	\$231,700	+	\$24,600	8	\$1,750,400	\$1,489,800	+	\$260,600	"	3	1½	3	Nil
Midland of Uruguay	319	Feb., 1934	9,313	+	1,790	34	77,993	67,947	+	10,046	Ord. Stk.	2	1	2	Nil
Nitrato	411	28.2.34	10,869	+	4,441	8	52,992	14,512	+	38,480	Ord. Sh.	78 6	11½	34	Nil
Paraguay Central	274	3.3.34	3,150	+	1,170	35	112,000	95,220	+	16,780	Pr. Li. Stk.	72	49½	70	6½
Peruvian Corporation	1,059	Feb., 1934	51,532	+	7,094	34	439,952	440,559	—	607	Pref.	151½	5	13	Nil
Salvador	100	24.2.34	2,833	—	3,188	35	42,161	90,756	—	48,595	Pr. Li. Db.	70	66½	7½	Nil
San Paulo	139½	25.2.34	31,004	—	12,062	8	205,753	252,685	—	46,932	Ord. Stk.	102	68	82	2½
Taitai	164	Jan., 1934	8,135	+	725	30	39,200	15,525	+	23,675	Ord. Sh.	13½	5½	15	Nil
United of Havana	1,365	3.3.34	33,592	—	4,095	35	521,092	571,389	—	50,297	Ord. Stk.	8	2	5	Nil
Uruguay Northern	73	Feb., 1934	1,086	—	70	34	9,391	12,630	—	3,239	Deb. Stk.	6	3½	5	Nil
Canada															
Canadian National	23,750	28.2.34	647,652	+	134,460	8	4,617,558	3,835,762	+	781,796	"				
Canadian Northern											Perp. Dbs.	60½	38	66	4½
Grand Trunk											4 p.c. Gar.	99½	85	99½	Nil
Canadian Pacific	17,018	28.2.34	435,400	+	68,000	8	3,508,200	2,954,600	+	553,600	Ord. Stk.	22½	11	16	Nil
India															
Assam Bengal	1,329	27.1.34	29,265	+	5,290	43	1,017,181	1,036,034	—	18,853	Ord. Stk.	79	70	76½	3½
Barsi Light	202	10.2.34	2,190	—	2,122	45	129,750	122,872	+	6,878	Ord. Sh.	101½	70	99½	5½
Bengal & North Western	2,113	10.2.34	41,778	—	15,554	19	867,024	887,584	—	20,560	Ord. Stk.	292	240	271	5½
Bengal Dooars & Extension	161	10.2.34	2,750	+	407	45	133,730	132,686	+	1,044	"	127	119	125	5½
Bengal-Nagpur	3,269	3.2.34	118,650	+	4,602	44	4,645,678	4,299,781	+	345,897	"	97½	83½	98½	4½
Bombay, Baroda & C. India	3,089	24.2.34	199,425	+	25,050	47	2,363,125	2,282,725	+	80,400	"	112	107	110½	5½
Madras & South'n Mahratta	3,230	3.2.34	113,400	—	7,803	44	4,712,867	4,564,339	+	148,528	"	127	114½	123½	5½
Rohilkhand & Kumaon	572	10.2.34	11,667	—	389	19	174,959	166,333	+	8,626	"	260	225	250	6½
South India	2,526	10.2.34	77,556	—	8,451	45	3,495,450	3,565,891	—	70,441	"	119½	112	116½	6½
Various															
Beira-Umtali	204	Dec., 1933	49,418	+	13,362	12	149,024	116,708	+	32,316	"				
Bilbao River & Cantabrian	15	Dec., 1933	988	+	48	52	18,980	21,553	—	2,573	"				
Egyptian Delta	621	10.2.34	7,137	+	466	46	206,432	226,381	—	19,949	Pr. Sh.	151½	13½	3	Nil
Great Southern of Spain	1,54	24.2.34	1,929	—	803	8	16,789	17,151	—	362	Inc. Deb.	4	3	5	Nil
Kenya & Uganda	1,625	Aug., 1933	159,746	+	12,456	35	1,523,550	1,273,216	+	250,334	"				
Manila											B. Deb.	53	33½	43½	8½
Mashonaland	913	Dec., 1933	90,716	+	35,205	12	277,053	178,354	+	98,699	1 Mg. Db.	91½	42	94	5½
Midland of W. Australia	277	31.1.34	15,353	+	1,292	30	95,749	91,747	+	4,002	Inc. Deb.	89	70	96½	4½
Nigerian	1,903	20.1.34	52,446	+	8,824	43	1,378,244	1,458,266	—	80,022	"				
Rhodesia	1,538	Dec., 1933	149,133	+	43,759	12	465,925	319,334	+	146,591	4 p.c. Db.	98½	80½	100	4
South African	13,151	10.2.34	463,061	+	48,066	46	20,479,443	17,756,290	+	2,723,183	"				
Victorian	6,172	Dec., 1933	731,550	—	113,258	25	4,307,656	4,520,111	—	212,455	"				
Zafra & Huelva	112	Nov., 1933	10,926	+	149	47	123,826	120,955	+	2,871	"				

NOTE.—Yields are based on the approximate current prices and are within a fraction of 1%.

† Receipts are calculated @ 1s. 6d. to the rupee.

‡ ex dividend.

§ Average rate of exchange for the week:—This year 327½. Last year 417½.

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61<sup>18</sup>  
57<sup>18</sup>  
41<sup>9</sup>

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